

PRODUCT INFORMATION



Prostaglandin J₂-d₄

Item No. 19345

CAS Registry No.: 2738376-80-0
Formal Name: (Z)-7-((1S,5R)-5-((S,E)-3-hydroxyoct-1-en-1-yl)-4-oxocyclopent-2-en-1-yl)hept-5-enoic-3,3,4,4-d₄ acid

Synonym: PGJ₂-d₄
MF: C₂₀H₂₆D₄O₄
FW: 338.5

Chemical Purity: ≥98% (Prostaglandin J₂)

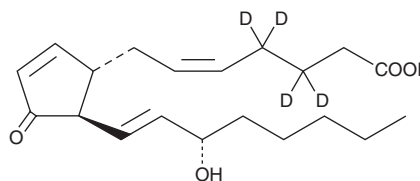
Deuterium

Incorporation: ≥99% deuterated forms (d₁-d₄); ≤1% d₀

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

Prostaglandin J₂ (PGJ₂)-d₄ is intended for use as an internal standard for the quantification of PGJ₂ (Item No. 18500) by GC- or LC-MS. The accuracy of the sample weight in this vial is between 5% over and 2% under the amount shown on the vial. If better precision is required, the deuterated standard should be quantitated against a more precisely weighed unlabeled standard by constructing a standard curve of peak intensity ratios (deuterated *versus* unlabeled).

PGJ₂-d₄ 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 PGJ₂-d₄ in these solvents is approximately 50 mg/ml.

Description

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 of about 5-10 nM.^{2,3} PGJ₂ has 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. Toon, S., Low, L.K., Gibaldi, M., *et al.* The warfarin-sulfinpyrazone interaction: Stereochemical considerations. *Clin. Pharmacol. Ther.* **39(1)**, 15-24 (1986).
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(6)**, 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(2)**, 131-146 (1984).
4. Fukushima, M. Prostaglandin J₂ - anti-tumor and anti-viral activities and the mechanisms involved. *Eicosanoids* **3(4)**, 189-199 (1990).

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.

WARRANTY AND LIMITATION OF REMEDY

Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

Copyright Cayman Chemical Company, 10/10/2023

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