

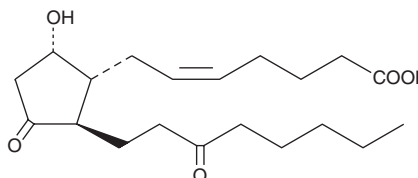
Product Information



13,14-dihydro-15-keto Prostaglandin D₂

Catalog No. 12610

CAS Registry No.: 59894-07-4
Formal Name: 9 α -hydroxy-11,15-dioxo-prost-5Z-en-1-oic acid
Synonym: 13,14-dihydro-15-keto PGD₂
MF: C₂₀H₃₂O₅
FW: 352.5
Purity: \geq 98%
Stability: \geq 1 year at -80°C
Supplied as: A solution in methyl acetate



Laboratory Procedures

For long term storage, we suggest that 13,14-dihydro-15-keto prostaglandin D₂ (13,14-dihydro-15-keto PGD₂) be stored as supplied at -80°C. It should be stable for at least one year.

13,14-dihydro-15-keto PGD₂ 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, or dimethyl formamide purged with an inert gas can be used. The solubility of 13,14-dihydro-15-keto PGD₂ in these solvents is approximately 30 mg/ml.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. If an organic solvent-free aqueous solution of 13,14-dihydro-15-keto PGD₂ is needed, it can be prepared by evaporating the methyl acetate and directly dissolving the neat oil in aqueous buffers. The solubility of 13,14-dihydro-15-keto PGD₂ in PBS (pH 7.2) is approximately 2.5 mg/ml. Store aqueous solutions of 13,14-dihydro-15-keto PGD₂ on ice and use within 12 hours of preparation.

13,14-dihydro-15-keto PGD₂ is a metabolite of PGD₂ which is formed through the 15-hydroxy PGDH pathway. 13,14-dihydro-15-keto PGD₂ was recently identified as a selective agonist for the CRTH2/DP₂ receptor.¹ It also inhibits ion flux in a canine colonic mucosa preparation.² In humans, 13,14-dihydro-15-keto PGD₂ is further metabolized to give 11 β -hydroxy compounds which have also undergone β -oxidation of one or both side chains. Virtually no 13,14-dihydro-15-keto PGD₂ survives intact in the urine.^{3,4}

References

1. Hirai, H., Tanaka, K., Yoshie, O., *et al.* Prostaglandin D₂ selectivity induces chemotaxis in T helper type 2 cells, eosinophils, and basophils via seven-transmembrane receptor CRTH2. *J. Exp. Med.* **193**(2), 255-261 (2001).
2. Rangachari, P.K. and Betti, P.-A. Biological activity of metabolites of PGD₂ on canine proximal colon. *Am. J. Physiol.* **264**, G886-G894 (1993).
3. Liston, T.E. and Roberts, L.J., II Metabolic fate of radiolabeled prostaglandin D₂ in a normal human male volunteer. *J. Biol. Chem.* **260**, 13172-13180 (1985).
4. Morrow, J.D., Prakash, C., Awad, J.A., *et al.* Quantification of the major urinary metabolite of prostaglandin D₂ by a stable isotope dilution mass spectrometric assay. *Anal. Biochem.* **193**, 142-148 (1991).

Related Products

Prostaglandin Metabolite HPLC Mixture - Cat. No. 10005 • Prostaglandin D₂ - Cat. No. 12010 • 11-deoxy-11-methylene-15-keto Prostaglandin D₂ - Cat. No. 12415 • 15-hydroxy Prostaglandin Dehydrogenase Polyclonal Antibody - Cat. No. 160615

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 under separate cover to the MSD supervisor at your institution.

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