

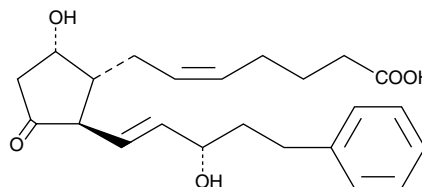
Product Information



17-phenyl trinor Prostaglandin D₂

Item No. 12810

CAS Registry No.: 85280-91-7
Formal Name: 9 α ,15S-dihydroxy-11-oxo-17-phenyl-18,19,20-trinor-prosta-5Z,13E-dien-1-oic acid
MF: C₂₃H₃₀O₅
FW: 386.5
Purity: \geq 98%
Stability: \geq 1 year at -20°C
Supplied as: A solution in methyl acetate



Laboratory Procedures

For long term storage, we suggest that 17-phenyl trinor prostaglandin D₂ (17-phenyl trinor PGD₂) be stored as supplied at -20°C. It will be stable for at least one year.

17-phenyl trinor 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, and dimethyl formamide purged with an inert gas can be used. The solubility of 17-phenyl trinor PGD₂ in these solvents is at least 25 mg/ml. 17-phenyl trinor PGD₂ is stable for approximately six months in these solvents if stored at -20°C.

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 solution of 17-phenyl trinor PGD₂ is needed, it can be prepared by evaporating the methyl acetate and directly dissolving the neat oil in aqueous buffers. The solubility of 17-phenyl trinor PGD₂ in PBS (pH 7.2) is approximately 5 mg/ml. We do not recommend storing the aqueous solution for more than one day.

PGD₂ is one of the five primary prostaglandins derived enzymatically from PGH₂. PGD₂ is produced abundantly in the cerebrospinal fluid (CSF) by the lipocalin-type PGD synthase, and in the periphery by myeloid cells including mast cells and basophils by a second, leukocyte-type PGD synthase.^{1,2} PGD₂ is chemically unstable, and its use and analysis is complicated by its short *in vivo* half-life.³

17-phenyl trinor PGD₂ is a novel, chemically stable analog of PGD₂ wherein the lower side chain is modified by the addition of a phenyl group at C-17 in place of the last 3 ω -chain carbon atoms. This modification has not been reported in a D-type prostaglandin. However, in the PGE and PGF series, the analogous modification leads to a stable, somewhat more potent agonist which embodies the same biological activities as the parent prostaglandins. No biological or physiologic studies of 17-phenyl trinor PGD₂ have been reported to date.

References

1. 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).
2. Hayaishi, O. Sleep-wake regulation by prostaglandins D₂ and E₂. *J. Biol. Chem.* **263**, 14593-14596 (1988).
3. 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).

Related Products

For a list of related products please visit: www.caymanchem.com/catalog/12810

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

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 Safety Data Sheet, which has been sent *via* email to your institution.

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