

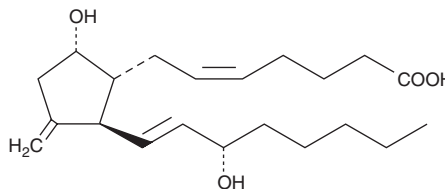
PRODUCT INFORMATION



11-deoxy-11-methylene Prostaglandin D₂

Item No. 12410

CAS Registry No.: 100648-29-1
Formal Name: 9 α ,15S-dihydroxy-11-methylene-prosta-5Z,13E-dien-1-oic acid
Synonym: 11-deoxy-11-methylene PGD₂
MF: C₂₁H₃₄O₄
FW: 350.5
Purity: \geq 98%
Supplied as: A solution in methyl acetate
Storage: -20°C
Stability: \geq 2 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

11-deoxy-11-methylene Prostaglandin D₂ (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 11-deoxy-11-methylene PGD₂ in these solvents is approximately 100 mg/ml.

11-deoxy-11-methylene PGD₂ is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, the methyl acetate solution of 11-deoxy-11-methylene PGD₂ should be diluted with the aqueous buffer of choice. The solubility of 11-deoxy-11-methylene PGD₂ in PBS (pH 7.2) is approximately 3.75 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

Prostaglandin D₂ (PGD₂; Item No. 12010) is one of the five primary enzymatic prostaglandins derived directly from PGH₂ (Item No. 17020). PGD₂ is produced abundantly in the 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 PGD₂ is chemically unstable, and its use and analysis is complicated by its short *in vivo* half-life. 11-deoxy-11-methylene PGD₂ is a novel, chemically stable, isosteric analog of PGD₂ wherein the 11-keto group is replaced by an exocyclic methylene. In the PGE series, the analogous modification leads to a stable, somewhat less potent agonist which embodies the same uterine stimulant and cervical ripening activities as the parent prostaglandin.² However, 11-deoxy-11-methylene PGD₂ has been reported by one group to be essentially without agonist activity on human platelets, a DP₁ receptor assay.³ The CRTH2-receptor actions of 11-deoxy-11-methylene PGD₂ are not yet reported.

References

1. Urade, Y. and Hayaishi, O. Prostaglandin D synthase: Structure and function. *Vitam. Horm.* **58**, 89-120 (2000).
2. Borten, M., DiLeo, L.A., and Friedman, E.A. Low-dose prostaglandin E₂ analogue for cervical dilations prior to pregnancy termination. *Am. J. Obstet. Gynecol.* **150**(5 Pt 1), 561-565 (1984).
3. Torisawa, Y., Yamaguchi, T., Sakata, S., *et al.* Synthesis of 11-deoxy-11-methylene-prostaglandin D₂ and its derivatives. *Chem. Pharm. Bull. (Tokyo)* **33**(10), 4625-4628 (1985).

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.

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