

Produktinformation



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SZABO-SCANDIC HandelsgmbH

Quellenstraße 110, A-1100 Wien T. +43(0)1 489 3961-0 F. +43(0)1 489 3961-7 <u>mail@szabo-scandic.com</u> www.szabo-scandic.com

PRODUCT INFORMATION



11-deoxy-11-methylene Prostaglandin D₂

Item No. 12410

CAS Registry No.:	100648-29-1	
Formal Name:	9a,15S-dihydroxy-11-methylene-	ОН
	prosta-5Z,13E-dien-1-oic acid	
Synonym:	11-deoxy-11-methylene PGD ₂	$\dot{\wedge}$ $\dot{\wedge}$ $ \dot{\wedge}$
MF:	C ₂₁ H ₃₄ O ₄	Соон
FW:	350.5	
Purity:	≥98%	H ₂ C
Stability:	≥1 year at -20°C	OH
Supplied as:	A solution methyl acetate	

Laboratory Procedures

For long term storage, we suggest that 11-deoxy-11-methylene prostaglandin D₂ (11-deoxy-11methylene PGD_{2} be stored as supplied at -20°C. It should be stable for at least one year.

11-deoxy-11-methylene 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.

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 11-deoxy-11-methylene PGD_2 is needed, it can be prepared by evaporating the methyl acetate and directly dissolving the neat oil in aqueous buffers. 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.

PGD₂ (Item No. 12010) is one of the five primary enzymatic PGs 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.

Description

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. Vitamins and Hormones 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, 561-565 (1984).
- Torisawa, Y., Yamaguchi, T., Sakata, S., et al. Synthesis of 11-deoxo-11-methylene-prostaglandin D 2 and 3. its derivatives. Chem. Pharm. Bull. 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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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