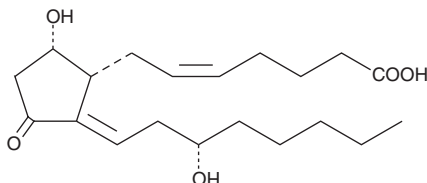


PRODUCT INFORMATION

Δ^{12} -Prostaglandin D₂

Item No. 12650

CAS Registry No.: 64072-89-5
Formal Name: 9 α ,15S-dihydroxy-11-oxo-prosta-5Z,12E-dien-1-oic acid
Synonym: Δ^{12} -PGD₂
MF: C₂₀H₃₂O₅
FW: 352.5
Purity: $\geq 98\%$
UV/Vis.: λ_{max} : 245 nm
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

Δ^{12} -Prostaglandin D₂ (Δ^{12} -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 Δ^{12} -PGD₂ in these solvents is approximately 30 mg/ml.

Δ^{12} -PGD₂ is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, the methyl acetate solution of Δ^{12} -PGD₂ should be diluted with the aqueous buffer of choice. The solubility of Δ^{12} -PGD₂ in PBS (pH 7.2) is approximately 2 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

PGD₂ is one of the five primary enzymatic prostaglandins derived directly from PGH₂. 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, hematopoietic-type PGD synthase. PGD₂ is chemically unstable, and its use and analysis is complicated by its short *in vivo* half-life. Δ^{12} -PGD₂ is one of the initial chemical decomposition products of PGD₂. Δ^{12} -PGD₂ is an intermediate in the pathway leading to Δ^{12} -PGJ₂, which is a cyclopentenone prostaglandin with antimitotic and carcinogenic activities.^{1,2} The metabolism of Δ^{12} -PGD₂ involves addition of thiol nucleophiles, as is the case with the majority of cyclopentenone prostaglandins.³

References

1. Fukushima, M. Prostaglandin J₂ - anti-tumor and anti-viral activities and the mechanisms involved. *Eicosanoids* **3**(4), 189-199 (1990).
2. Kato, T., Fukushima, M., Kurozumi, S., et al. Antitumor activity of Δ^7 -prostaglandin A₁ and Δ^{12} -prostaglandin J₂ *in vitro* and *in vivo*. *Cancer Res.* **46**(7), 3538-3542 (1986).
3. Atsmon, J., Sweetman, B.J., Baertschi, S.W., et al. Formation of thiol conjugates of 9-deoxy- Δ^9 , Δ^{12} (E)-prostaglandin D₂ and Δ^{12} (E)-prostaglandin D₂. *Biochemistry* **29**(15), 3760-3765 (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.

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