

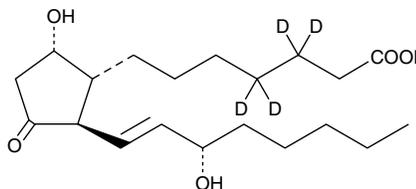
Product Information



Prostaglandin D₁-d₄

Item No. 312000

Formal Name: 9 α ,15S-dihydroxy-11-oxo-prost-13E-en-1-oic-3,3,4,4-d₄ acid
MF: C₂₀H₃₀D₄O₅
FW: 358.5
Chemical Purity: ≥99%
Deuterium Incorporation: ≥99% deuterated forms (d₁-d₄); ≤1% d₀
Stability: ≥1 year at -20°C
Supplied as: A solution in methyl acetate



Laboratory Procedures

Prostaglandin D₁-d₄ (PGD₁-d₄) contains four deuterium atoms at the 3, 3', 4, and 4' positions. It is intended for use as an internal standard for the quantification of PGD₁ by GC- or LC-mass spectrometry (MS). For long term storage, we suggest that PGD₁-d₄ be stored as supplied at -20°C. It should be stable for at least one year.

PGD₁-d₄ 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 PGD₁-d₄ in these solvents is approximately 50 mg/ml.

PGD₁-d₄ is used as an internal standard for the quantification of PGD₁ by stable isotope dilution MS. The accuracy of the sample weight in this vial is between 5% over and 2% under the weight indicated on the vial. If better precision is required, the deuterated standard should be quantitated against a more precisely weighed unlabeled standard PGD₁ by constructing a standard curve of peak intensity ratios (deuterated *versus* unlabeled).

PGD₁ is the theoretical D-series metabolite of dihomo- γ -linolenic acid (DGLA), but to date it has not been isolated as a natural product. It is an inhibitor of ADP-induced platelet aggregation in humans with an IC₅₀ value of 320 ng/ml, which is about 10-fold less potent than PGD₂.¹

Reference

1. Bundy, G.L., Morton, D.R., Peterson, D.C., *et al.* Synthesis and platelet aggregation inhibiting activity of prostaglandin D analogues. *J. Med. Chem.* **26**, 790-799 (1983).

Related Products

For a list of related products please visit: www.caymanchem.com/catalog/312000

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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 *via* email to your institution.

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