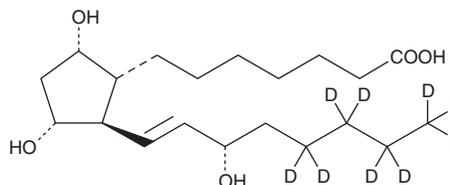


PRODUCT INFORMATION



Prostaglandin F_{1α}-d₉ Item No. 10008665

CAS Registry No.: 1542166-81-3
Formal Name: 9α,11α,15S-trihydroxy-prost-13E-en-1-oic-17,17,18,18,19,19,20,20,20-d₉ acid
Synonym: PGF_{1α}-d₉
MF: C₂₀H₂₇D₉O₅
FW: 365.6
Chemical Purity: ≥90%
Deuterium Incorporation: ≥99% deuterated forms (d₁-d₉); ≤1% d₀
Supplied as: A solution in methyl acetate
Storage: -20°C
Stability: ≥2 years



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

Laboratory Procedures

Prostaglandin F_{1α}-d₉ (PGF_{1α}-d₉) is intended for use as an internal standard for the quantification of PGF_{1α} (Item No. 15010) by GC- or LC-MS. The accuracy of the sample weight in this vial is between 5% over and 2% under the amount shown on the vial. If better precision is required, the deuterated standard should be quantitated against a more precisely weighed unlabeled standard by constructing a standard curve of peak intensity ratios (deuterated versus unlabeled).

PGF_{1α}-d₉ 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 PGF_{1α}-d₉ in these solvents is approximately 50 mg/ml.

Description

PGF_{1α} is the putative metabolite of dihomo-γ-linolenic acid (DGLA) via the cyclooxygenase (COX) pathway. Both PGF_{1α} and PGF_{2α} have been shown to act as priming pheromones for male Atlantic salmon with a threshold concentration of 10-11 M.¹ PGF_{1α} binds to the ovine corpus luteum FP receptor at only 8% of the relative potency of PGF_{2α}.² It is only half as active as PGF_{2α} in inducing human respiratory smooth muscle contractions *in vitro*.³

References

1. Moore, A. and Waring, C.P. Electrophysiological and endocrinological evidence that F-series prostaglandins function as priming pheromones in mature male Atlantic salmon (*Salmo salar*) PARR. *J. Exp. Biol.* **199**, 2307-2316 (1996).
2. Balapure, A.K., Rexroad, C.E., Jr., Kawada, K., *et al.* Structural requirements for prostaglandin analog interaction with the ovine corpus luteum prostaglandin F_{2α} receptor. *Biochem. Pharmacol.* **38**, 2375-2381 (1989).
3. Karim, S.M.M., Adaikan, P.G., and Kottegoda, S.R. Prostaglandins and human respiratory tract smooth muscle: Structure activity relationship. *Adv. Prostaglandin Thromboxane Res.* **7**, 969-980 (1980).

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.

WARRANTY AND LIMITATION OF REMEDY

Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

Copyright Cayman Chemical Company, 02/23/2024

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