

Produktinformation



Forschungsprodukte & Biochemikalien



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Diagnostik & molekulare Diagnostik



Laborgeräte & Service

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PRODUCT INFORMATION



Prostaglandin $F_{2\alpha}$ -d₉ Item No. 10008643

Formal Name: 9a,11a,15S-trihydroxy-

prosta-5Z,13E-dien-1-oic-

17,17,18,18,19,19,20,20,20-do acid

Synonym: Dinoprost-do MF: $C_{20}H_{25}D_9O_5$ 363.5 FW: **Chemical Purity:** ≥98%

Deuterium

Incorporation: \geq 99% deuterated forms (d₁-d₉); \leq 1% d₀

Supplied as: A solution in methyl acetate

-20°C Storage:

As supplied, 1 year from the QC date provided on the Certificate of Analysis, when Stability:

stored properly

Laboratory Procedures

Prostaglandin $F_{2\alpha}$ -d $_9$ (PGF $_{2\alpha}$ -d $_9$) contains nine deuterium atoms at the 17, 17', 18, 18', 19, 19', 20, 20, and 20 positions. It is intended for use as an internal standard for the quantification of PGF $_{2\alpha}$ by GC- or LC-mass spectrometry (MS). For long term storage, we suggest that PGF_{2a} - d_{o} be stored as supplied at -20°C. It should be stable for at least one year.

PGF_{2a}-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_{2n}-d₀ in is these solvents is approximately 100 mg/ml.

 $PGF_{2q}-d_9$ is used as an internal standard for the quantification of PGF_{2q} by stable isotope dilution 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).

Description

 $PGF_{2\alpha}$ is a widely distributed PG occurring in many species.¹⁻³ It causes contraction of vascular, bronchial, intestinal, and myometrial smooth muscle, and also exhibits potent luteolytic activity.¹ $PGF_{2\alpha}$ exerts its receptor mediated physiological activity at 50-100 nM.¹ Maximal ovine myometrial contraction can be achieved at 125 nM PGF_{2a} in vitro.4

References

- 1. Samuelsson, B., Goldyne, M., Granström, E., et al. Annu. Rev. Biochem. 47, 997-1029 (1978).
- 2. Speroff, L. and Ramwell, P.W. Am. J. Obstet. Gynecol. 107, 1111-1130 (1970).
- 3. Watanabe, K., Iguchi, Y., Iguchi, S., et al. Proc. Natl. Acad. Sci. USA 83, 1583-1587 (1986).
- 4. Crankshaw, D.J. and Gaspar, V. J. Reprod. Fertil. 103, 55-61 (1995).

WARNING
THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

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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