

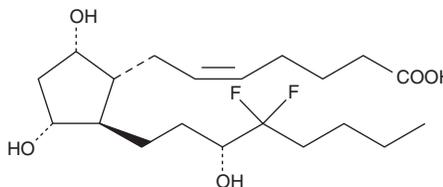
PRODUCT INFORMATION



13,14-dihydro-16,16-difluoro Prostaglandin F_{2α}

Item No. 13609

Formal Name:	9α,11α,15S-trihydroxy-16,16-difluoro-prosta-5Z-en-1-oic acid
Synonym:	13,14-dihydro-16,16-difluoro PGF _{2α}
MF:	C ₂₀ H ₃₄ F ₂ O ₅
FW:	392.5
Purity:	≥95%
Supplied as:	A solution in methyl acetate
Storage:	-20°C
Stability:	≥1 year



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

Laboratory Procedures

13,14-dihydro-16,16-difluoro Prostaglandin F_{2α} (13,14-dihydro-16,16-difluoro PGF_{2α}) 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 13,14-dihydro-16,16-difluoro PGF_{2α} in these solvents is approximately 15, 20, and 14, respectively.

13,14-dihydro-16,16-difluoro PGF_{2α} is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, the methyl acetate solution of 13,14-dihydro-16,16-difluoro PGF_{2α} should be diluted with the aqueous buffer of choice. 13,14-dihydro-16,16-difluoro PGF_{2α} has a solubility of 0.1 mg/ml in a 1:10 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

PGF_{2α} causes contraction of vascular, bronchial, intestinal, and myometrial smooth muscle, and also exhibits potent luteolytic activity.^{1,2} 13,14-dihydro-16,16-difluoro PGF_{2α} is an analog of PGF_{2α}. While its biological activities have not been evaluated, it should be noted that the addition of two electron-withdrawing fluorine atoms has been used to stabilize prostanoids and significantly delay degradation *in vivo*.³ Importantly, 13,14-dihydro PGE₁ has activity that is comparable to that of PGE₁, suggesting that this analog of PGF_{2α} could be biologically active.^{4,5}

References

1. Samuelsson, B., Goldyne, M., Granström, E., *et al.* Prostaglandins and thromboxanes. *Annu. Rev. Biochem.* **47**, 997-1029 (1978).
2. Basu, S. Novel cyclooxygenase-catalyzed bioactive prostaglandin F_{2α} from physiology to new principles in inflammation. *Med. Res. Rev.* **27(4)**, 435-468 (2007).
3. Hatano, Y., Kohli, J.D., Goldberg, L.I., *et al.* Vascular relaxing activity and stability studies of 10,10-difluoro-13,14-dehydroprostacyclin. *Proc. Natl. Acad. Sci. USA* **77(11)**, 6846-6850 (1980).
4. Änggård, E. The biological activities of three metabolites of prostaglandin E₁. *Acta Physiol. Scand.* **66(4)**, 509-510 (1966).
5. Hamberg, M. and Samuelsson, B. On the metabolism of prostaglandins E₁ and E₂ in man. *J. Biol. Chem.* **246(22)**, 6713-6721 (1971).

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