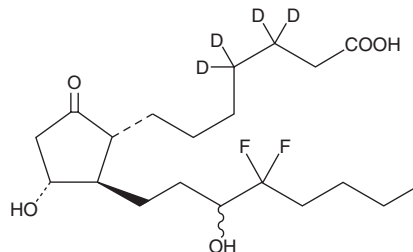


PRODUCT INFORMATION



13,14-dihydro-15(R,S)-hydroxy-16,16-difluoro Prostaglandin E₁-d₄ Item No. 9000406

Formal Name:	9-oxo-11 α ,15R,S-dihydroxy-16,16-difluoro-prostan-1-oic-3,3,4,4-d ₄ acid
Synonym:	15-hydroxy Lubiprostone
MF:	C ₂₀ H ₃₀ D ₄ F ₂ O ₅
FW:	396.5
Chemical Purity:	≥98% (13,14-dihydro-15(R,S)-hydroxy-16,16-difluoro Prostaglandin E ₁)
Deuterium Incorporation:	≥99% deuterated forms (d ₁ -d ₄); ≤1% d ₀
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

13,14-dihydro-15(R,S)-hydroxy-16,16-difluoro Prostaglandin E₁-d₄ is intended for use as an internal standard for the quantification of 13,14-dihydro-15(R,S)-hydroxy-16,16-difluoro prostaglandin E₁ 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).

13,14-dihydro-15(R,S)-hydroxy-16,16-difluoro Prostaglandin E₁-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 (DMF) purged with an inert gas can be used. The solubility of 13,14-dihydro-15(R,S)-hydroxy-16,16-difluoro Prostaglandin E₁-d₄ in ethanol and DMF is approximately 10 mg/ml and approximately 5 mg/ml in DMSO.

Description

PGE₁ is produced by the metabolism of dihomo- γ -linolenic acid (DGLA) by the cyclooxygenase pathway. PGE₁ inhibits platelet aggregation (IC₅₀ = 40 nM) and increases vasodilation.^{1,2} 13,14-dihydro-16,16-difluoro PGE₁ is a biologically active metabolite of PGE₁, inhibiting platelet aggregation with comparable potency to the parent compound.^{2,3} The addition of two electron-withdrawing fluorine atoms, which should stabilize the molecule against hydrolytic cleavage, may be expected to delay degradation *in vivo*.⁴ 13,14-dihydro-15(R,S)-hydroxy-16,16-difluoro PGE₁-3,3',4,4'-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 13,14-dihydro-15(R,S)-hydroxy-16,16-difluoro Prostaglandin E₁ by GC- or LC-mass spectrometry (MS).

References

1. Kobzar, G., Mardla, V., Järving, I., et al. *Proc. Estonian Acad. Sci. Chem.* **40(N3)**, 179-180 (1991).
2. Westwick, J. *Br. J. Pharmacol.* **58(2)**, 297P-298P (1976).
3. Peskar, B.A., Cawello, W., Rogatti, W., et al. *J. Physiol. Pharmacol.* **42(3)**, 327-331 (1991).
4. Hatano, Y., Kohli, J.D., Goldberg, L.I., et al. *Proc. Natl. Acad. Sci. USA* **77(11)**, 6846-6850 (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.

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