

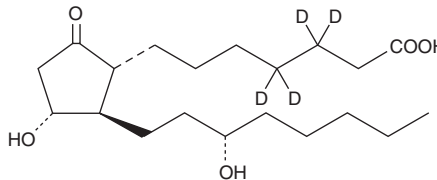
PRODUCT INFORMATION



13,14-dihydro Prostaglandin E₁-d₄

Item No. 9000281

Formal Name:	9-oxo-11 α ,15S-dihydroxy-prostan-1-oic-3,3,4,4-d ₄ acid
Synonyms:	13,14-dh PGE ₁ -d ₄ , Prostaglandin E ₀ -d ₄
MF:	C ₂₀ H ₃₆ D ₄ O ₅
FW:	360.5
Chemical Purity:	≥98% (13,14-dihydro 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 Prostaglandin E₁-d₄ (13,14-dh PGE₁-d₄) is intended for use as an internal standard for the quantification of 13,14-dh PGE₁ (Item No. 13610) 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-dh PGE₁-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 13,14-dh PGE₁-d₄ in these solvents is approximately 50 mg/ml.

13,14-dh PGE₁-d₄ is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, the methyl acetate solution of 13,14-dh PGE₁-d₄ should be diluted with the aqueous buffer of choice. The solubility of 13,14-dh PGE₁-d₄ in PBS (pH 7.2) is approximately 1 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

13,14-dh PGE₁ is an inhibitor of ADP-induced platelet aggregation in human platelet-rich plasma and washed platelets with IC₅₀ values of 31 and 21 nM, respectively.¹ 13,14-dh PGE₁ is a slightly more potent inhibitor of ADP-induced human platelet aggregation than PGE₁ which has an IC₅₀ of 40 nM.² Also, 13,14-dh PGE₁ activates adenylate cyclase in NCB-20 hybrid cells with a K_{act} of 668 nM.³

References

1. Kobzar, G., Mardla, V., Järving, I., *et al.* Comparison of the inhibitory effect of E-prostaglandins in human and rabbit platelet-rich plasma and washed platelets. *Comp. Biochem. Physiol.* **106(2)**, 489-494 (1993).
2. Kobzar, G., Mardla, V., Järving, I., *et al.* Antiaggregating potency of E-type prostaglandins in human and rabbit platelets. *Proc. Estonian Acad. Sci. Chem.* **40**, 179-180 (1991).
3. Blair, I.A., Hensby, C.N., and MacDermot, J. Prostacyclin-dependent activation of adenylate cyclase in a neuronal somatic cell hybrid: Prostanoid structure-activity relationships. *Br. J. Pharmacol.* **69**, 519-525 (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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