

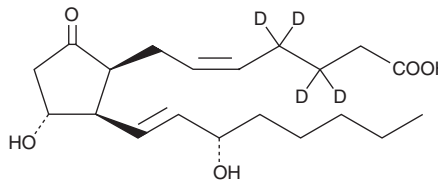
PRODUCT INFORMATION



8-iso Prostaglandin E₂-d₄

Item No. 10011321

Formal Name: 9-oxo-11a,15S-dihydroxy-(8b)-prosta-5Z,13E-dien-1-oic-3,3,4,4-d₄ acid
Synonyms: 8-*epi* PGE₂-d₄, 8-*iso* PGE₂-d₄
MF: C₂₀H₂₈D₄O₅
FW: 356.5
Chemical Purity: ≥98% 8-*iso* Prostaglandin E₂
Deuterium Incorporation: ≥99% deuterated forms (d₁-d₄); ≤1% d₀
Supplied as: A solution in methanol
Storage: -20°C
Stability: ≥2 years



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

Laboratory Procedures

8-*iso* Prostaglandin E₂-d₄ (8-*iso* PGE₂-d₄) is intended for use as an internal standard for the quantification of 8-*iso* Prostaglandin E₂ (Item No. 14350) 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).

8-*iso* PGE₂-d₄ is supplied as a solution in methanol. To change the solvent, simply evaporate the methanol 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 8-*iso* PGE₂-d₄ in these solvents is approximately 100 mg/ml.

Description

8-*iso* PGE₂-d₄ is one of several isoprostanes produced from arachidonic acid during lipid peroxidation.¹ It is a potent renal vasoconstrictor in the rat.^{1,2} 8-*iso* PGE₂ inhibits U-46619 or I-BOP-induced platelet aggregation with IC₅₀ values of 0.5 and 5 μM, respectively.³ When infused into the renal artery of the rat at a concentration of 4 mg/kg/min, 8-*iso* PGE₂ decreases the GFR and renal plasma flow by 80% without affecting blood pressure.¹

References

1. Morrow, J.D., Minton, T.A., Mukundan, C.R., *et al.* Free radical-induced generation of isoprostanes *in vivo*. Evidence for the formation of D-ring and E-ring isoprostanes. *J. Biol. Chem.* **269**, 4317-4326 (1994).
2. Hoffman, S.W., Moore, S., and Ellis, E.F. Isoprostanes: Free radical-generated prostaglandins with constrictor effects on cerebral arterioles. *Stroke* **28**, 844-84 (1997).
3. Longmire, A.W., Roberts, L.J., and Morrow, J.D. Actions of the E₂-isoprostane, 8-*iso*-PGE₂, on the platelet thromboxane/endoperoxide receptor in humans and rats: Additional evidence for the existence of a unique isoprostane receptor. *Prostaglandins* **48**, 247-256 (1994).

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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