

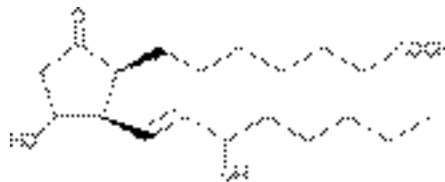
Product Information



8-iso Prostaglandin E₁

Item No. 13360

CAS Registry No: 21003-46-3
Formal Name: 9-oxo-11 α ,15S-dihydroxy-(8 β)-prost-13E-en-1-oic acid
Synonyms: 8-*epi* PGE₁, 8-*iso* PGE₁, Ovinonic acid
MF: C₂₀H₃₄O₅
FW: 354.5
Purity: ≥98%
Stability: ≥2 years at -20°C
Supplied as: A light yellow crystalline solid



Laboratory Procedures

8-*iso* Prostaglandin E₁ (8-*iso* PGE₁) is a naturally occurring isoprostane. For long term storage, we suggest that 8-*iso* PGE₁ be stored as supplied at -20°C. It should be stable for at least two years.

8-*iso* PGE₁ is supplied as a crystalline solid. A stock solution may be made by dissolving the 8-*iso* PGE₁ in an organic solvent purged with an inert gas. 8-*iso* PGE₁ is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of 8-*iso* PGE₁ in these solvents is approximately 50 mg/ml. 8-*iso* PGE₁ will be stable for at least six months in these solvents if stored at -20°C.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. If an organic solvent-free aqueous solution of 8-*iso* PGE₁ is needed, it can be prepared by directly dissolving the crystalline compound in aqueous buffers. The solubility of 8-*iso* PGE₁ in PBS (pH 7.2) is approximately 1.6 mg/ml. Store aqueous solutions of 8-*iso* PGE₁ on ice and use within 12 hours of preparation. Although the aqueous solutions of 8-*iso* PGE₁ may be stable for more than 12 hours, we strongly recommend using a fresh preparation each day.

Isoprostanes are a family of prostanoid molecules of non-cyclooxygenase origin.¹ 8-*iso* PGE₁ is an isoprostane which is found in human semen at levels of 7 μ g/ml.² It is a pulmonary vasoconstrictor in anesthetized dogs with a potency similar to PGF_{2 α} .³

References

1. Morrow, J.D., Hill, K.E., Burk, R.F., *et al.* A series of prostaglandin F₂-like compounds are produced *in vivo* in humans by a non-cyclooxygenase, free radical-catalyzed mechanism. *Proc. Natl. Acad. Sci. USA* **87**, 9383-9387 (1990).
2. Taylor, P.L. The 8-isoprostaglandins: Evidence for eight compounds in human semen. *Prostaglandins* **17**, 259-267 (1979).
3. Nakano, J. and Kessinger, J.M. Effects of 8-isoprostaglandin E₁ on the systemic and pulmonary circulations in dogs. *Proc. Soc. Exp. Biol. Med.* **133**, 1314-1317 (1970).

Related Products

Prostaglandin E₁ - Item No. 13010 • Prostaglandin F_{2 α} - Item No. 16010 • 8-*iso* Prostaglandin F_{2 α} - Item No. 16350

WARNING: THIS PRODUCT IS FOR LABORATORY RESEARCH ONLY. NOT FOR ADMINISTRATION TO HUMANS. NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

MATERIAL SAFETY DATA

This material should be considered hazardous until information to the contrary becomes available. Do not ingest, swallow, or inhale. Do not get in eyes, on skin, or on clothing. Wash thoroughly after handling. This information contains some, but not all, of the information required for the safe and proper use of this material. Before use, the user must review the complete Material Safety Data Sheet, which has been sent under separate cover to the MSD supervisor at your institution.

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