

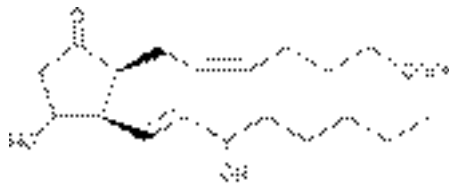
Product Information



8-*iso* Prostaglandin E₂

Item No. 14350

CAS Registry No.: 27415-25-4
Formal Name: 9-oxo-11 α ,15S-dihydroxy-(8 β)-prosta-5Z,13E-dien-1-oic acid
MF: C₂₀H₃₂O₅
FW: 352.5
Purity: \geq 99%
Stability: \geq 2 years at -20°C
Supplied as: A crystalline solid



Laboratory Procedures

For long term storage, we suggest that 8-*iso* Prostaglandin E₂ (8-*iso* PGE₂) be stored as supplied at -20°C. It should be stable for at least two years.

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

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Avoid adding 8-*iso* PGE₂ to basic solutions (pH >7.4), since base treatment will degrade 8-*iso* PGE₂ to PGA and PGB compounds. Also, ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. The solubility of 8-*iso* PGE₂ in PBS (pH 7.2) is approximately 5 mg/ml. We do not recommend storing the aqueous solution for more than one day.

8-*iso* PGE₂ 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 μ M, respectively.³ When infused into the renal artery of the rat at a concentration of 4 μ g/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).

Related Product

8-*iso*-15-keto Prostaglandin E₂ - Item No. 14390

WARNING: THIS PRODUCT IS NOT FOR HUMAN OR ANIMAL DISEASE DIAGNOSIS OR THERAPEUTIC DRUG 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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Cayman Chemical

Mailing address

1180 E. Ellsworth Road
Ann Arbor, MI
48108 USA

Phone

(800) 364-9897
(734) 971-3335

Fax

(734) 971-3640

E-Mail

custserv@caymanchem.com

Web

www.caymanchem.com