

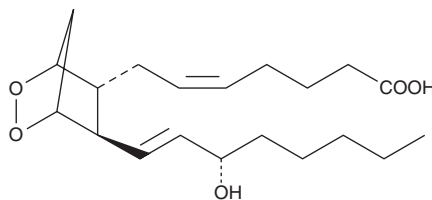
Product Information



Prostaglandin H₂

Catalog No. 17020

CAS Registry No.: 42935-17-1
Formal Name: 9 α ,11 α -epidioxy-15S-hydroxy-prosta-5Z,13E-dien-1-oic acid
MF: C₂₀H₃₂O₅
FW: 352.5
Purity: \geq 95%
Stability: \geq 6 months at -80°C
Supplied as: A solution in acetone



Laboratory Procedures

For long term storage, we suggest that prostaglandin H₂ (PGH₂) be stored as supplied at -80°C.

PGH₂ is a very unstable compound and therefore stock solutions should be kept on ice at all times while performing experiments in the lab. PGH₂ is supplied as a solution in acetone. To change the solvent, first place the vial of PGH₂ on ice. Next, evaporate the acetone under a gentle stream of nitrogen and immediately add the solvent of choice. Solvents such as ethanol purged with an inert gas can be used. The solubility of PGH₂ in ethanol 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. 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 solution of PGH₂ is needed, it can be prepared by evaporating the acetone and directly dissolving the neat oil in aqueous buffers. The solubility of PGH₂ in PBS (pH 7.2) is approximately 2 mg/ml. Store aqueous solutions of PGH₂ on ice and use immediately as the half-life of PGH₂ in aqueous solutions is approximately 10 minutes.

PGH₂ was first isolated from incubations of arachidonic acid with ovine seminal vesicle microsomes, and was described as a potent vasoconstrictor.¹ PGH₂ is the precursor for all 2-series PGs and thromboxanes,² and is a TP receptor agonist which irreversibly aggregates human platelets at 50-100 ng/ml. PGH₂ is a suicide substrate for platelet thromboxane synthase possessing a K_i of 18 μ M as compared to 28 μ M for PGH₁.³

References

1. Hamberg, M., Svensson, J., Wakabayashi, T., *et al.* Isolation and structure of two prostaglandin endoperoxides that cause platelet aggregation. *Proc. Natl. Acad. Sci. USA* **71**, 345-349 (1974).
2. Samuelsson, B., Goldyne, M., Granström, E., *et al.* Prostaglandins and thromboxanes. *Annu. Rev. Biochem.* **47**, 997-1029 (1978).
3. Jones, D.A. and Fitzpatrick, F.A. "Suicide" inactivation of thromboxane A₂ synthase. Characteristics of mechanism-based inactivation with isolated enzyme and intact platelets. *J. Biol. Chem.* **265**, 20166-20171 (1990).

Related Products

Prostaglandin G₂ - Cat. No. 17010 • Prostaglandin H₁ - Cat. No. 17015 • 12(S)-HHTrE - Cat. No. 34590 • COX-1 (ovine) - Cat. No. 60100 • COX-2 (ovine) - Cat. No. 60120 • Arachidonic Acid - Cat. No. 90010 • [³H]-Prostaglandin H₂ - Cat. No. 217020

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 MSDS 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