

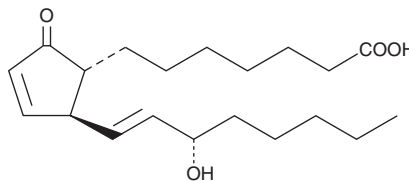
PRODUCT INFORMATION



Prostaglandin A₁

Item No. 10010

CAS Registry No.: 14152-28-4
Formal Name: 9-oxo-15S-hydroxy-prosta-10,13E-dien-1-oic acid
Synonym: PGA₁
MF: C₂₀H₃₂O₄
FW: 336.5
Purity: ≥98%
Stability: ≥2 years at -20°C
Supplied as: A crystalline solid
UV/Vis.: λ_{max}: 216 nm ε: 13,000



Laboratory Procedures

For long term storage, we suggest that prostaglandin A₁ (PGA₁) be stored as supplied at -20°C. It should be stable for at least two years.

PGA₁ is supplied as a crystalline solid. A stock solution may be made by dissolving the PGA₁ in an organic solvent purged with an inert gas. PGA₁ is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of PGA₁ in these solvents is approximately 50 mg/ml. PGA₁ should be stable for at least one year 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. Organic solvent-free aqueous solutions of PGA₁ can be prepared by directly dissolving the crystalline compound in aqueous buffers. The solubility of PGA₁ in PBS (pH 7.2) is approximately 2.4 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

PGA₁ was first isolated as a dehydration product of the PGE₁ compounds found in human semen.¹ PGA₁ has been shown to cause renal vasodilation, increased urine sodium excretion, and lowered arterial pressure in hypertensive patients.² It has also shown growth-inhibitory activity on tumor cells; the IC₅₀ value for the inhibition of human ovarian cancer is 7.5 μM.³

References

1. Hamberg, M. and Samuelsson, B. Prostaglandins in human seminal plasma. *J. Biol. Chem.* **241**, 257-263 (1966).
2. Krakoff, L.R., Vlachakis, N., Mendlowitz, M., *et al.* Differential effect of prostaglandin A₁ in hypertensive patients with low, normal and high renin. *Clin. Sci. Mol. Med.* **48**, 311s-313s (1975).
3. Kikuchi, Y., Kita, T., Hirata, J., *et al.* Preclinical studies of antitumor prostaglandins by using human ovarian cancer cells. *Cancer and Metastasis Reviews* **13**, 309-315 (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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