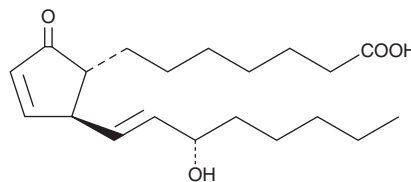


PRODUCT INFORMATION



Prostaglandin A₁ Item No. 10010

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



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

Laboratory Procedures

Prostaglandin A₁ (PGA₁) is supplied as a crystalline solid. A stock solution may be made by dissolving the PGA₁ in the solvent of choice, which should be purged with an inert gas. PGA₁ is soluble in organic solvents such as ethanol, acetone, DMSO, and dimethyl formamide (DMF). The solubility of PGA₁ in ethanol and acetone is approximately 100 mg/ml, approximately 50 mg/ml in DMSO, and approximately 75 mg/ml in DMF.

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 solid 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 It has been shown to cause renal vasodilation, increased urine sodium excretion, and lowered arterial pressure in hypertensive patients.² It also has 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(2)**, 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. Suppl.* **2**, 311s-313s (1975).
3. Kikuchi, Y., Kita, T., Hirata, J., *et al.* Preclinical studies of antitumor prostaglandins by using human ovarian cancer cells. *Cancer Metastasis Rev.* **13(3-4)**, 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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