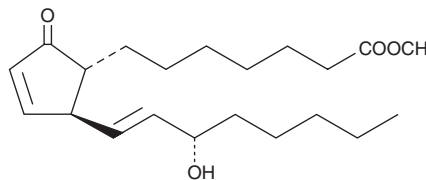


PRODUCT INFORMATION



Prostaglandin A₁ methyl ester Item No. 9000184

CAS Registry No.: 26771-94-8
Formal Name: 15S-hydroxy-9-oxo-prosta-10,13E-dien-1-oic acid, methyl ester
Synonym: PGA₁ methyl ester
MF: C₂₁H₃₄O₄
FW: 350.5
Purity: ≥98%
UV/Vis.: λ_{max}: 217 nm
Supplied as: A solution in ethanol
Storage: -20°C
Stability: ≥2 years



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

Laboratory Procedures

PGA₁ methyl ester is supplied as a solution in ethanol. To change the solvent, simply evaporate the ethanol under a gentle stream of nitrogen and immediately add the solvent of choice. Solvents such as DMSO and dimethyl formamide purged with an inert gas can be used. The solubility of PGA₁ methyl ester in these solvents is approximately 50 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 PGA₁ methyl ester is needed, it can be prepared by evaporating the ethanol and directly dissolving the neat oil in aqueous buffers. The solubility of PGA₁ methyl ester in PBS, pH 7.2, is approximately 2 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

PGA₁ has been shown to cause renal vasodilation, increase urine sodium excretion, and lowers arterial pressure in hypertensive patients.¹ It also has displayed growth-inhibitory activity on tumor cells; the IC₅₀ value for the inhibition of human ovarian cancer is 7.5 μM.^{2,3} PGA₁ methyl ester is a lipophilic analog of PGA₁ which may be more amenable for certain formulations or applications.

References

1. 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).
2. Kikuchi, Y., Kita, T., Hirata, J., *et al.* Preclinical studies of anti-tumor prostaglandins by using human ovarian cancer cells. *Cancer Metastasis Rev.* **13**, 309-315 (1994).
3. Marini, S., Palamara, A.T., Garaci, E., *et al.* Growth inhibition of friend erythroleukaemia cell tumours *in vivo* by a synthetic analogue of prostaglandin A: An action independent of natural killer-activity. *Br. J. Cancer* **61**, 394-399 (1990).

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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