

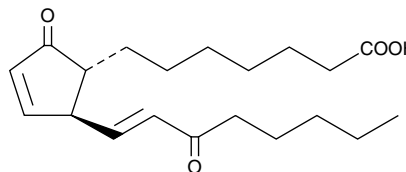
Product Information



15-keto Prostaglandin A₁

Item No. 9000142

CAS Registry No.: 61600-67-7
Formal Name: 9,15-dioxo-prosta-10,13E-dien-1-oic acid
Synonym: 15-keto PGA₁
MF: C₂₀H₃₀O₄
FW: 334.5
Purity: ≥95%
Stability: ≥1 year at -20°C
Supplied as: A solution in methyl acetate



Laboratory Procedures

For long term storage, we suggest that 15-keto prostaglandin A₁ (15-keto PGA₁) be stored as supplied at -20°C. It should be stable for at least one year.

15-keto PGA₁ is supplied as a solution in methyl acetate. To change the solvent, simply evaporate the methyl acetate 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 15-keto PGA₁ 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 15-keto PGA₁ is needed, it can be prepared by evaporating the methyl acetate and directly dissolving the neat oil in aqueous buffers. The solubility of 15-keto PGA₁ in PBS, pH 7.2, is approximately 1 mg/ml. We do not recommend storing the aqueous solution for more than one day.

PGA₁ (Item No. 10010) was first isolated as a dehydration product of the PGE₁ (Item No. 13010) compounds found in human semen.¹ 15-keto PGA₁ is a metabolite of PGA₁, produced by 15-hydroxy PG dehydrogenase.² It can be produced from PGA₁ in pig lung, trachea, aorta, and pulmonary artery tissue preparations.² 15-keto PGA₁, given at a concentration of 6 μM, causes vasoconstriction of rabbit lung that is comparable to that induced by angiotensin II.³

References

1. Hamberg, M. and Samuelsson, B. Prostaglandins in human seminal plasma. *J. Biol. Chem.* **241**, 257-263 (1966).
2. Ody, C., Dieterle, Y., Wand, I., *et al.* PGA₁ and PGF_{2α} metabolism by pig pulmonary endothelium, smooth muscle, and fibroblasts. *J. Appl. Physiol. Respir. Environ. Exerc. Physiol.* **46(2)**, 211-216 (1979).
3. Gross, K.B. and Gillis, C.N. Comparison of the pulmonary vascular response to prostaglandin A₁, prostaglandin F_{2α} and angiotensin II; metabolism of PGA₁ in lung. *Life Sci.* **19(11)**, 1653-1661 (1976).

Related Products

For a list of related products please visit: www.caymanchem.com/catalog/9000142

WARNING: THIS PRODUCT IS FOR LABORATORY RESEARCH ONLY: NOT FOR ADMINISTRATION TO HUMANS. NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

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 Safety Data Sheet, which has been sent via email to your institution.

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