

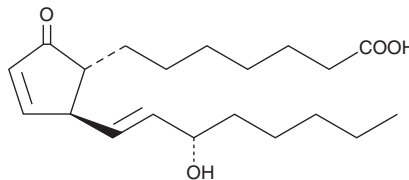
# Product Information



## Prostaglandin A<sub>1</sub>

Item No. 10010

**CAS Registry No.:** 14152-28-4  
**Formal Name:** 9-oxo-15S-hydroxy-prosta-10,13E-dien-1-oic acid  
**MF:** C<sub>20</sub>H<sub>32</sub>O<sub>4</sub>  
**FW:** 336.5  
**Purity:** ≥98%  
**Stability:** ≥2 years at -20°C  
**Supplied as:** A crystalline solid  
**UV/Vis.:** λ<sub>max</sub>: 216 nm ε: 13,000



### Laboratory Procedures

For long term storage, we suggest that Prostaglandin A<sub>1</sub> (PGA<sub>1</sub>) be stored as supplied at -20°C. It should be stable for at least two years.

PGA<sub>1</sub> is supplied as a crystalline solid. A stock solution may be made by dissolving the PGA<sub>1</sub> in an organic solvent purged with an inert gas. PGA<sub>1</sub> is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of PGA<sub>1</sub> in these solvents is approximately 50 mg/ml. PGA<sub>1</sub> 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 PGA<sub>1</sub> can be prepared by directly dissolving the crystalline compound in aqueous buffers. The solubility of PGA<sub>1</sub> in PBS (pH 7.2) is approximately 2.4 mg/ml. We do not recommend storing the aqueous solution for more than one day.

PGA<sub>1</sub> was first isolated as a dehydration product of the PGE<sub>1</sub> compounds found in human semen.<sup>1</sup> PGA<sub>1</sub> has been shown to cause renal vasodilation, increased urine sodium excretion, and lowered arterial pressure in hypertensive patients.<sup>2</sup> It has also shown growth-inhibitory activity on tumor cells; the IC<sub>50</sub> value for the inhibition of human ovarian cancer is 7.5 μM.<sup>3</sup>

### 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 A<sub>1</sub> 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).

### Related Product

Prostaglandin E<sub>1</sub> - Item No. 13010

**WARNING: THIS PRODUCT IS FOR LABORATORY RESEARCH ONLY. NOT FOR ADMINISTRATION TO HUMANS. NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC 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 *via* email to your institution.

#### WARRANTY AND LIMITATION OF REMEDY

Cayman Chemical Company makes **no warranty or guarantee** of any kind, whether written or oral, expressed or implied, including without limitation, any warranty of fitness for a particular purpose, suitability and merchantability, which extends beyond the description of the chemicals hereof. Cayman **warrants only** to the original customer that the material will meet our specifications at the time of delivery.

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