

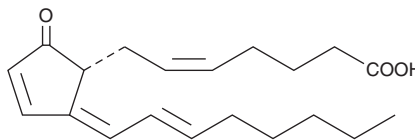
# PRODUCT INFORMATION



## 15-deoxy- $\Delta^{12,14}$ -Prostaglandin A<sub>2</sub>

Item No. 10265

**CAS Registry No:** 112839-31-3  
**Formal Name:** 9-oxo-prosta-5Z,10,12Z,14E-tetraen-1-oic acid  
**Synonym:** 15-deoxy- $\Delta^{12,14}$ -PGA<sub>2</sub>  
**MF:** C<sub>20</sub>H<sub>28</sub>O<sub>3</sub>  
**FW:** 316.4  
**Purity:** ≥98% (isomer mixture; major component is *trans,trans*- $\Delta^{12,14}$ )  
**UV/Vis:**  $\lambda_{\text{max}}$ : 324 nm  
**Supplied as:** A 5 mg/ml solution in methyl acetate  
**Storage:** -20°C  
**Stability:** ≥4 years



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

### Laboratory Procedures

15-deoxy- $\Delta^{12,14}$ -PGA<sub>2</sub> 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, or dimethyl formamide purged with an inert gas can be used. The solubility of 15-deoxy- $\Delta^{12,14}$ -PGA<sub>2</sub> in these solvents is approximately 100, 50, and 75 mg/ml, respectively.

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 aqueous solution of 15-deoxy- $\Delta^{12,14}$ -PGA<sub>2</sub> is needed, it can be prepared by evaporating the methyl acetate and directly dissolving the neat oil in aqueous buffers. The solubility of 15-deoxy- $\Delta^{12,14}$ -PGA<sub>2</sub> in PBS (pH 7.2) is approximately 2.4 mg/ml. Avoid adding 15-deoxy- $\Delta^{12,14}$ -PGA<sub>2</sub> to basic solutions (pH > 7.4), since 15-deoxy- $\Delta^{12,14}$ -PGA<sub>2</sub> is unstable under basic conditions. Although the aqueous solutions of 15-deoxy- $\Delta^{12,14}$ -PGA<sub>2</sub> may be stable for more than 12 hours, we strongly recommend using a fresh preparation each day.

### Description

15-deoxy- $\Delta^{12,14}$ -PGA<sub>2</sub> is a synthetic analog of PGA<sub>2</sub>. It shares common structural features with 15-deoxy- $\Delta^{12,14}$ -PGJ<sub>2</sub>, which is a ligand for PPAR $\gamma$ .<sup>1,2</sup> Antimitotic and antitumor activity have been reported for a similar analog, but there are no published reports on the biological activity of 15-deoxy- $\Delta^{12,14}$ -PGA<sub>2</sub> at this time.<sup>3</sup>

### References

1. Forman, B.M., Tontonoz, P., Chen, J., *et al.* 15-Deoxy- $\Delta^{12,14}$ -prostaglandin J<sub>2</sub> is a ligand for the adipocyte determination factor PPAR $\gamma$ . *Cell* **83**, 803-812 (1995).
2. Kliewer, S.A., Lenhard, J.M., Willson, T.M., *et al.* A prostaglandin J<sub>2</sub> metabolite binds peroxisome proliferator-activated receptor  $\gamma$  and promotes adipocyte differentiation. *Cell* **83**, 813-819 (1995).
3. Kato, T., Fukushima, M., Kurozumi, S., *et al.* Antitumor activity of  $\Delta^7$ -prostaglandin A<sub>1</sub> and  $\Delta^{12}$ -prostaglandin J<sub>2</sub> *in vitro* and *in vivo*. *Cancer Res.* **46**, 3538-3542 (1986).

#### 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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