

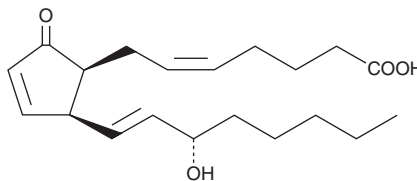
# Product Information



## 8-*iso* Prostaglandin A<sub>2</sub>

Item No. 10235

<b>Formal Name:</b>	9-oxo-15S-hydroxy-(8β)-prosta-5Z,10,13E-trien-1-oic acid
<b>MF:</b>	C <sub>20</sub> H <sub>30</sub> O <sub>4</sub>
<b>FW:</b>	334.5
<b>Purity:</b>	≥98%
<b>Stability:</b>	≥1 year at -20°C
<b>Supplied as:</b>	A solution in methyl acetate
<b>UV/Vis.:</b>	λ <sub>max</sub> : 217 nm



### Laboratory Procedures

For long term storage, we suggest that 8-*iso* prostaglandin A<sub>2</sub> (8-*iso* PGA<sub>2</sub>) be stored as supplied at -20°C. It should be stable for at least one year.

8-*iso* 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, and dimethyl formamide purged with an inert gas can be used. The solubility of 8-*iso* 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 solution of 8-*iso* 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 8-*iso* PGA<sub>2</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.

Isoprostanes are PG-like compounds produced *in vivo* by free radical-catalyzed peroxidation of arachidonoyl-containing lipids. 8-*iso* PGA<sub>2</sub> is one of several isoprostanes produced from peroxidation of arachidonic acid esterified in phospholipids.<sup>1</sup> 8-*iso* PGA<sub>2</sub> is the dehydration product of 8-*iso* PGE<sub>2</sub>, a potent renal vasoconstrictor.<sup>2</sup> Evidence for the *in vivo* production of 8-*iso* PGA<sub>2</sub> has been shown in rat liver under conditions of oxidative stress.<sup>3</sup> There are no published studies of the pharmacological properties of 8-*iso* PGA<sub>2</sub>.

### References

1. Morrow, J.D., Minton, T.A., Mukundan, C.R., *et al.* Free radical-induced generation of isoprostanes *in vivo*. Evidence for the formation of D-ring and E-ring isoprostanes. *J. Biol. Chem.* **269**, 4317-4326 (1994).
2. Longmire, A.W., Roberts, L.J., and Morrow, J.D. Actions of the E<sub>2</sub>-isoprostane, 8-*iso*-PGE<sub>2</sub>, on the platelet thromboxane/endoperoxide receptor in humans and rats: Additional evidence for the existence of a unique isoprostane receptor. *Prostaglandins* **48**, 247-256 (1994).
3. Chen, Y., Zackert, W.E., Robers, L.J.II., *et al.* Evidence for the formation of a novel cyclopentenone isoprostane, 15-A<sub>2t</sub>-isoprostane (8-*iso*-prostaglandin A<sub>2</sub>) *in vivo*. *Biochem. Biophys. Acta* **1436**, 550-556 (1999).

### Related Products

8-*iso* Prostaglandin A<sub>1</sub> - Item No. 10035 • Prostaglandin A<sub>2</sub> - Item No. 10210 • 8-*iso* Prostaglandin E<sub>2</sub> - Item No. 14350 • Prostaglandin A<sub>2</sub>-biotin - Item No. 10010499 • 8-*iso* Prostaglandin A<sub>2</sub>-biotin - Item No. 10010500

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