



# SZABO SCANDIC

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## Produktinformation



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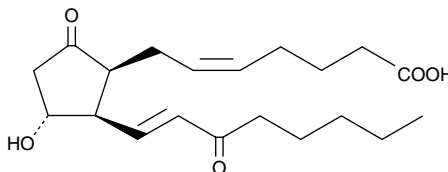
# Product Information



## 8-*iso*-15-keto Prostaglandin E<sub>2</sub>

Item No. 14390

**CAS Registry No.:** 914804-63-0  
**Formal Name:** 9,15-dioxo-11 $\alpha$ -hydroxy-(8 $\beta$ )-prosta-5Z,13E-1-oic acid  
**Synonyms:** 8-*epi*-15-keto PGE<sub>2</sub>, 8-*iso*-15-keto PGE<sub>2</sub>  
**MF:** C<sub>20</sub>H<sub>30</sub>O<sub>5</sub>  
**FW:** 350.5  
**Purity:**  $\geq$ 98%  
**Stability:**  $\geq$ 1 year at -20°C  
**Supplied as:** A solution in methyl acetate



### Laboratory Procedures

For long term storage, we suggest that 8-*iso*-15-keto prostaglandin E<sub>2</sub> (8-*iso*-15-keto PGE<sub>2</sub>) be stored as supplied at -20°C. It will be stable for at least one year.

8-*iso*-15-keto PGE<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*-15-keto PGE<sub>2</sub> in these solvents is approximately 20 mg/ml. 8-*iso*-15-keto PGE<sub>2</sub> is stable for at least six months 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. If an organic solvent-free solution of 8-*iso*-15-keto PGE<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*-15-keto PGE<sub>2</sub> in PBS (pH 7.2) is approximately 1.4 mg/ml. We do not recommend storing the aqueous solution for more than one day.

8-*iso*-15-keto PGE<sub>2</sub> is an isoprostane, one member of a large family of biomarkers produced by the free radical peroxidative degradation of membrane lipids.<sup>1</sup> 8-*iso*-15-keto PGE<sub>2</sub> is the theoretical first metabolite of 8-*iso* PGE<sub>2</sub> via the 15-hydroxy PGDH pathway. While a number of potent biological activities have been attributed to 8-*iso* PGE<sub>2</sub>,<sup>2</sup> there are no published reports at this time regarding its metabolism.

### References

1. Morrow, J.D., Hill, K.E., Burk, R.F., *et al.* A series of prostaglandin F<sub>2</sub>-like compounds are produced *in vivo* in humans by a non-cyclooxygenase, free radical-catalyzed mechanism. *Proc. Natl. Acad. Sci. USA* **87**, 9383-9387 (1990).
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).

### Related Products

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