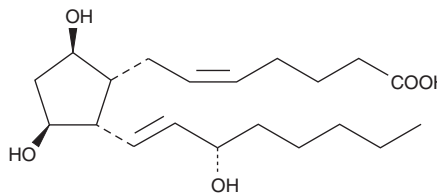


# PRODUCT INFORMATION



## *ent*-8-*iso*-15(S)-Prostaglandin F<sub>2a</sub> Item No. 10010380

**CAS Registry No.:** 214748-66-0  
**Formal Name:** 9b,11b,15S-trihydroxy-(12b)-  
prosta-5Z,13E-dien-1-oic acid  
**Synonyms:** *ent*-8-*iso*-15-*epi*-PGF<sub>2a</sub>,  
*ent*-15-*epi*-F<sub>2t</sub>-Isoprostane  
**MF:** C<sub>20</sub>H<sub>34</sub>O<sub>5</sub>  
**FW:** 354.5  
**Purity:** ≥98%  
**Stability:** ≥1 year at -20°C  
**Supplied as:** A solution in acetonitrile



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

### Laboratory Procedures

*ent*-8-*iso*-15-*epi*-PGF<sub>2a</sub> is supplied as a solution in acetonitrile. To change the solvent, simply evaporate the acetonitrile 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 *ent*-8-*iso*-15(S)-PGF<sub>2a</sub> in these solvents is approximately 100 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 *ent*-8-*iso*-15(S)-PGF<sub>2a</sub> is needed, it can be prepared by evaporating the acetonitrile and directly dissolving the neat oil in aqueous buffers. The solubility of *ent*-8-*iso*-15(S)-PGF<sub>2a</sub> in PBS, pH 7.2, is approximately 10 mg/ml. For greater aqueous solubility, *ent*-8-*iso*-15(S)-PGF<sub>2a</sub> can be directly dissolved in 10 M Na<sub>2</sub>CO<sub>3</sub> (solubility of approximately 6.5 mg/ml) and then diluted with PBS (pH 7.2) to achieve the desired concentration or pH. We do not recommend storing the aqueous solution for more than one day.

### Description

Isoprostanes are produced by the non-enzymatic, free radical peroxidation of phospholipid-esterified arachidonic acid. They have been used as biomarkers of oxidative stress, but they also have been found to have potent biological activity. *ent*-8-*iso*-15(S)-PGF<sub>2a</sub> is a potent vasoconstrictor of porcine retinal and brain microvessels with EC<sub>50</sub> values of 15 and 24 nM, respectively.<sup>1</sup> This isoprostane is about ten-fold more potent than 8-*iso*-PGF<sub>2a</sub> in a whole blood platelet aggregation inhibition assay.<sup>2</sup>

### References

- Hou, X., Robers, L.J.II., Gobeil, F., Jr., *et al.* Isomer-specific contractile effects of a series of synthetic F<sub>2</sub>-isoprostanes on retinal and cerebral microvasculature. *Free Radic. Biol. Med.* **36(2)**, 163-172 (2004).
- Shizuka, M. and Snapper, M.L. Selective synthesis of *ent*-15-*epi*-F<sub>2t</sub>-isoprostane and a deuterated derivative. *Synthesis* **15**, 2397-2403 (2007).

#### 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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