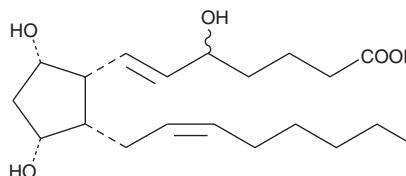


# PRODUCT INFORMATION



## 8,12-iso-iPF<sub>2α</sub>-VI Item No. 16310

**CAS Registry No.:** 1445349-99-4  
**Formal Name:** (12α)-5,9α,11α-trihydroxy-prosta-6E,14Z-dien-1-oic acid  
**Synonyms:** 8,12-iso-Isoprostane-F<sub>2α</sub>-VI, 12-iso-5,6E,14Z-PGF<sub>2α</sub>, 12-iso-5,6E,14Z-Prostaglandin F<sub>2α</sub>  
**MF:** C<sub>20</sub>H<sub>34</sub>O<sub>5</sub>  
**FW:** 354.5  
**Purity:** ≥95%  
**Storage:** -20°C  
**Stability:** ≥1 year  
**Supplied as:** A solution in acetonitrile



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

### Laboratory Procedures

8,12-iso-iPF<sub>2α</sub>-VI is supplied as a solution in acetonitrile. To change the solvent, simply evaporate the 8,12-iso-iPF<sub>2α</sub>-VI 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 8,12-iso-iPF<sub>2α</sub>-VI in these solvents is approximately 50 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 8,12-iso-iPF<sub>2α</sub>-VI is needed, it can be prepared by evaporating the acetonitrile and directly dissolving the neat oil in aqueous buffers. The solubility of 8,12-iso-iPF<sub>2α</sub>-VI in PBS, pH 7.2, is approximately 0.5 mg/ml. We do not recommend storing the aqueous solution for more than one day.

### Description

8,12-iso-iPF<sub>2α</sub>-VI is an isoprostane produced by non-enzymatic, free radical-induced peroxidative damage to membrane lipids. It is the most abundant isoprostane product that is formed during lipid peroxidation and is used as a biomarker for oxidative stress.<sup>1</sup> 8,12-iso-iPF<sub>2α</sub>-VI is detected after CCl<sub>4</sub>-induced oxidative damage to hepatic tissue and has been found to be elevated in the urine, blood, and cerebrospinal fluid of patients with Alzheimer's disease.<sup>2-4</sup>

### References

1. Li, H., Lawson, J.A., Reilly, M., *et al.* Quantitative high performance liquid chromatography/tandem mass spectrometric analysis of the four classes of F<sub>2</sub>-isoprostanes in human urine. *Proc. Natl. Acad. Sci. USA* **96**(23), 13381-13386 (1999).
2. Sicilia, T., Mally, A., Schauer, U., *et al.* LC-MS/MS methods for the detection of isoprostanes (iPF<sub>2α</sub>-III and 8,12-iso-iPF<sub>2α</sub>-VI) as biomarkers of CCl<sub>4</sub>-induced oxidative damage to hepatic tissue. *J. Chromatogr. B* **861**, 48-55 (2008).
3. Praticò, D., Clark, C.M., Liun, F., *et al.* Increase of brain oxidative stress in mild cognitive impairment. A possible predictor of Alzheimer disease. *Arch. Neurol.* **59**, 972-976 (2002).
4. Shaw, L.M., Korecka, M., Clark, C.M., *et al.* Biomarkers of neurodegeneration for diagnosis and monitoring therapeutics. *Nat. Rev. Drug Discov.* **6**, 295-303 (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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