

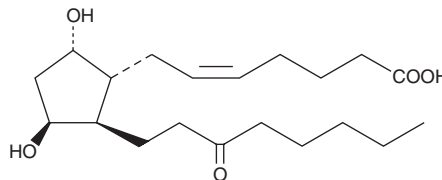
# PRODUCT INFORMATION



## 11 $\beta$ -13,14-dihydro-15-keto Prostaglandin F<sub>2 $\alpha$</sub>

Item No. 16540

**CAS Registry No.:** 107615-77-0  
**Formal Name:** 9 $\alpha$ ,11 $\beta$ -dihydroxy-15-oxo-prost-5Z-en-1-oic acid  
**Synonyms:** 11 $\beta$ -13,14-dihydro-15-keto PGF<sub>2 $\alpha$</sub> <sup>2 $\alpha$ '</sup>  
11-*epi* 13,14-dihydro-15-keto PGF<sub>2 $\alpha$</sub>   
**MF:** C<sub>20</sub>H<sub>34</sub>O<sub>5</sub>  
**FW:** 354.5  
**Purity:**  $\geq$ 95%  
**Supplied as:** A solution in methyl acetate  
**Storage:** -20°C  
**Stability:**  $\geq$ 1 year



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

### Laboratory Procedures

11 $\beta$ -13,14-dihydro-15-keto PGF<sub>2 $\alpha$</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 11 $\beta$ -13,14-dihydro-15-keto PGF<sub>2 $\alpha$</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 11 $\beta$ -13,14-dihydro-15-keto PGF<sub>2 $\alpha$</sub>  is needed, it can be prepared by evaporating the methyl acetate and directly dissolving the neat oil in aqueous buffers. The solubility of 11 $\beta$ -13,14-dihydro-15-keto PGF<sub>2 $\alpha$</sub>  in PBS (pH 7.2) is approximately 10 mg/ml. We do not recommend storing the aqueous solution for more than one day.

### Description

11 $\beta$ -13,14-dihydro-15-keto PGF<sub>2 $\alpha$</sub>  is a metabolite of PGD<sub>2</sub> (Item No. 12010) in the 15-hydroxy PGDH pathway.<sup>1,2</sup> Infusion or inhalation of tritiated PGD<sub>2</sub> in normal males results in the appearance of peak levels of both 11 $\beta$ -PGF<sub>2 $\alpha$</sub> <sup>2 $\alpha$ '</sup> as the immediate product, and 11 $\beta$ -13,14-dihydro-15-keto PGF<sub>2 $\alpha$</sub>  in the plasma within 10 minutes.<sup>1</sup> Homogenates of human lung metabolize PGD<sub>2</sub> first to 11 $\beta$ -PGF<sub>2 $\alpha$</sub> <sup>2 $\alpha$ '</sup> and then to 11 $\beta$ -15-keto-PGF<sub>2 $\alpha$</sub>  in the presence of NAD<sup>+</sup>, but not 11 $\beta$ -13,14-dihydro-15-keto PGF<sub>2 $\alpha$</sub> <sup>2 $\alpha$ '</sup>.<sup>2</sup> Guinea pig liver and kidney homogenates metabolize PGD<sub>2</sub> to 11 $\beta$ -13,14-dihydro-15-keto PGF<sub>2 $\alpha$</sub> <sup>2 $\alpha$ '</sup> via 11 $\beta$ -PGF<sub>2 $\alpha$</sub> <sup>2 $\alpha$ '</sup> in the presence of NAD<sup>+</sup> and NADP<sup>+</sup>.<sup>2</sup>

### References

1. Robinson, C., Hardy, C.C., and Holgate, S.T. The metabolism of prostaglandin D<sub>2</sub> after inhalation or intravenous infusion in normal men. *Biochim. Biophys. Acta* **963**, 151-161 (1988).
2. Robinson, C., Herbert, C.A., Bedwell, S., *et al.* The metabolism of prostaglandin D<sub>2</sub>. Evidence for the sequential conversion by NADPH and NAD<sup>+</sup> dependent pathways. *Biochem. Pharmacol.* **38(19)**, 3267-3271 (1989).

#### 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.

#### WARRANTY AND LIMITATION OF REMEDY

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