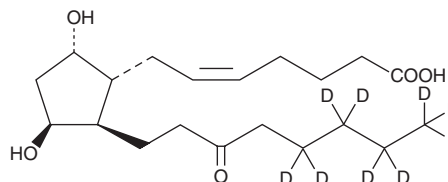


# PRODUCT INFORMATION



## 11 $\beta$ -13,14-dihydro-15-keto Prostaglandin F<sub>2 $\alpha$</sub> -d<sub>9</sub> Item No. 18787

**CAS Registry No.:** 2738376-88-8  
**Formal Name:** (Z)-7-((1R,2R,3S,5S)-3,5-dihydroxy-2-(3-oxooctyl-5,5,6,6,7,7,8,8,8-d<sub>9</sub>)cyclopentyl)hept-5-enoic acid  
**Synonyms:** 11 $\beta$ -13,14-dihydro-15-keto PGF<sub>2 $\alpha$</sub> -d<sub>9</sub>,  
11-*epi* 13,14-dihydro-15-keto PGF<sub>2 $\alpha$</sub> -d<sub>9</sub>  
**MF:** C<sub>20</sub>H<sub>25</sub>D<sub>9</sub>O<sub>5</sub>  
**FW:** 363.5  
**Chemical Purity:**  $\geq$ 95% (11 $\beta$ -13,14-dihydro-15-keto PGF<sub>2 $\alpha$</sub> )  
**Deuterium Incorporation:**  $\geq$ 99% deuterated forms (d<sub>1</sub>-d<sub>9</sub>);  $\leq$ 1% d<sub>0</sub>  
**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 Prostaglandin F<sub>2 $\alpha$</sub> -d<sub>9</sub> (11 $\beta$ -13,14-dihydro-15-keto PGF<sub>2 $\alpha$</sub> -d<sub>9</sub>) is intended for use as an internal standard for the quantification of 11 $\beta$ -13,14-dihydro-15-keto PGF<sub>2 $\alpha$</sub>  (Item No. 16540) by GC- or LC-MS. The accuracy of the sample weight in this vial is between 5% over and 2% under the amount shown on the vial. If better precision is required, the deuterated standard should be quantitated against a more precisely weighed unlabeled standard by constructing a standard curve of peak intensity ratios (deuterated *versus* unlabeled).

11 $\beta$ -13,14-dihydro-15-keto PGF<sub>2 $\alpha$</sub> -d<sub>9</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> -d<sub>9</sub> in these solvents is approximately 50 mg/ml.

### Description

11 $\beta$ -13,14-dihydro-15-keto PGF<sub>2 $\alpha$</sub>  is a metabolite of prostaglandin D<sub>2</sub> (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> , 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>  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</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>  via 11 $\beta$ -PGF<sub>2 $\alpha$</sub>  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**(2), 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

Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

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