

# PRODUCT INFORMATION



## 2,3-dinor-11 $\beta$ -Prostaglandin F<sub>2 $\alpha$</sub> -d<sub>9</sub>

Item No. 9000603

**Formal Name:** (Z)-5-((1R,2R,3S,5S)-3,5-dihydroxy-2-((S,E)-3-hydroxyoct-1-en-1-yl-5,5,6,6,7,7,8,8,8-d<sub>9</sub>)cyclopentyl)pent-3-enoic acid

**Synonyms:** BPG-d<sub>9</sub>, 2,3-dinor-11-*epi* PGF<sub>2 $\alpha$</sub> -d<sub>9</sub>, 2,3-dinor-11 $\beta$ -PGF<sub>2 $\alpha$</sub> -d<sub>9</sub>

**MF:** C<sub>18</sub>H<sub>21</sub>D<sub>9</sub>O<sub>5</sub>

**FW:** 335.5

**Chemical Purity:**  $\geq 95\%$  (2,3-dinor-11 $\beta$ -Prostaglandin F<sub>2 $\alpha$</sub> )

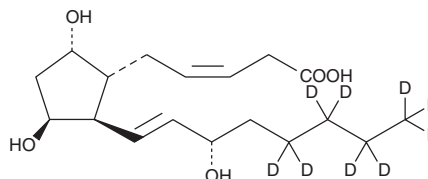
**Deuterium**

**Incorporation:**  $\geq 99\%$  deuterated forms (d<sub>1</sub>-d<sub>9</sub>);  $\leq 1\%$  d<sub>0</sub>

**Supplied as:** A solution in ethanol

**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

2,3-dinor-11 $\beta$ -Prostaglandin F<sub>2 $\alpha$</sub> -d<sub>9</sub> (2,3-dinor-11 $\beta$ -PGF<sub>2 $\alpha$</sub> -d<sub>9</sub>) is intended for use as an internal standard for the quantification of 2,3-dinor-11 $\beta$ -PGF<sub>2 $\alpha$</sub>  (Item No. 16350) 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).

2,3-dinor-11 $\beta$ -PGF<sub>2 $\alpha$</sub> -d<sub>9</sub> is supplied as a solution in ethanol. To change the solvent, simply evaporate the ethanol under a gentle stream of nitrogen and immediately add the solvent of choice. Solvents such as DMSO and dimethyl formamide purged with an inert gas can be used. The solubility of 2,3-dinor-11 $\beta$ -PGF<sub>2 $\alpha$</sub> -d<sub>9</sub> in these solvents is approximately 100 mg/ml.

### Description

2,3-dinor-11 $\beta$ -PGF<sub>2 $\alpha$</sub>  is a metabolite of PGD<sub>2</sub> (Item No. 12010).<sup>1,2</sup> Urinary excretion of 2,3-dinor-11 $\beta$ -PGF<sub>2 $\alpha$</sub>  is increased in patients with mast cell activation disease (MCAD) and has been used as a marker of increased PGD<sub>2</sub> levels.<sup>3</sup> 2,3-dinor-11 $\beta$ -PGF<sub>2 $\alpha$</sub>  levels are also increased in the urine of patients with asthma and are positively correlated with impaired lung function.<sup>4</sup>

### References

1. Liston, T.E. and Roberts, L.J., II Metabolic fate of radiolabeled prostaglandin D<sub>2</sub> in a normal human male volunteer. *J. Biol. Chem.* **260**(24), 13172-13180 (1985).
2. Song, W.L., Wang, M., Ricciotti, E., et al. Tetranor PGDM, an abundant urinary metabolite reflects biosynthesis of prostaglandin D<sub>2</sub> in mice and humans. *J. Biol. Chem.* **283**(2), 1179-1188 (2008).
3. Castells, M. and Butterfield, J. Mast cell activation syndrome and mastocytosis: Initial treatment options and long-term management. *J. Allergy Clin. Immunol. Pract.* **7**(4), 1097-1106 (2019).
4. Kolmert, J., Gómez, C., Balgoma, D., et al. Urinary leukotriene E<sub>4</sub> and prostaglandin D<sub>2</sub> metabolites increase in adult and childhood severe asthma characterized by type 2 inflammation. A clinical observational study. *Am. J. Respir. Crit. Care Med.* **203**(1), 37-53 (2021).

#### 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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