



# SZABO SCANDIC

Part of Europa Biosite

## Produktinformation



Forschungsprodukte & Biochemikalien



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Diagnostik & molekulare Diagnostik



Laborgeräte & Service

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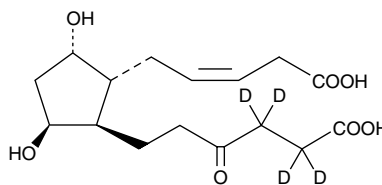
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# Product Information



## PGDM-d<sub>4</sub> Item No. 11344

**Formal Name:** 9 $\alpha$ ,11 $\beta$ -dihydroxy-15-oxo-13,14-dihydro-2,3,18,19-tetranor-prostan-1,20-dioic acid-18,18',19,19'-d<sub>4</sub>  
**Synonym:** Prostaglandin D Metabolite-d<sub>4</sub>  
**MF:** C<sub>16</sub>H<sub>20</sub>D<sub>4</sub>O<sub>7</sub>  
**FW:** 332.4  
**Chemical Purity:**  $\geq$ 90% (mixture) PGDM  
**Deuterium Incorporation:**  $\geq$ 99% deuterated forms (d<sub>1</sub>-d<sub>4</sub>);  $\leq$ 1% d<sub>0</sub>  
**Stability:**  $\geq$ 6 months at -80°C  
**Supplied as:** A solution in methyl acetate



### Laboratory Procedures

PGDM-d<sub>4</sub> contains four deuterium atoms at the 17, 17', 18, and 18' positions. It is intended for use as an internal standard for the quantification of PGDM by GC- or LC-mass spectrometry (MS). For long term storage, we suggest that PGDM-d<sub>4</sub> be stored as supplied at -80°C. It should be stable for at least six months.

PGDM-d<sub>4</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 PGDM-d<sub>4</sub> in these solvents is approximately 50 mg/ml.

PGDM-d<sub>4</sub> is used as an internal standard for the quantification of PGDM by stable isotope dilution 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).

PGD<sub>2</sub> plays a pharmacological role in allergic and asthmatic anaphylaxis, normal physiological sleep and lowering of body temperature, as well as inhibits platelet aggregation and relaxes vascular smooth muscle.<sup>1</sup> PGDM is a major urinary metabolite of PGD<sub>2</sub> with a unique lower sidechain that readily undergoes reversible cyclization.<sup>2</sup> It is used as a biomarker to assess endogenous production of PGD<sub>2</sub>.

### References

- Giles, H. and Leff, P. The biology and pharmacology of PGD<sub>2</sub>. *Prostaglandins* **35**, 277-300 (1988).
- Morrow, J.D., Prakash, C., Awad, J.A., *et al.* Quantification of the major urinary metabolite of prostaglandin D<sub>2</sub> by a stable isotope dilution mass spectrometric assay. *Anal. Biochem.* **193**, 142-148 (1991).

### Related Products

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**WARNING: THIS PRODUCT IS FOR LABORATORY RESEARCH ONLY; NOT FOR ADMINISTRATION TO HUMANS. NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.**

#### MATERIAL SAFETY DATA

This material should be considered hazardous until information to the contrary becomes available. Do not ingest, swallow, or inhale. Do not get in eyes, on skin, or on clothing. Wash thoroughly after handling. This information contains some, but not all, of the information required for the safe and proper use of this material. Before use, the user must review the complete Material Safety Data Sheet, which has been sent *via* email to your institution.

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