



# SZABO SCANDIC

Part of Europa Biosite

## Produktinformation



Forschungsprodukte & Biochemikalien



Zellkultur & Verbrauchsmaterial



Diagnostik & molekulare Diagnostik



Laborgeräte & Service

Weitere Information auf den folgenden Seiten!  
See the following pages for more information!



### Lieferung & Zahlungsart

siehe unsere [Liefer- und Versandbedingungen](#)

### Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

### SZABO-SCANDIC HandelsgmbH

Quellenstraße 110, A-1100 Wien

T. +43(0)1 489 3961-0

F. +43(0)1 489 3961-7

[mail@szabo-scandic.com](mailto:mail@szabo-scandic.com)

[www.szabo-scandic.com](http://www.szabo-scandic.com)

[linkedin.com/company/szaboscandic](https://www.linkedin.com/company/szaboscandic) 

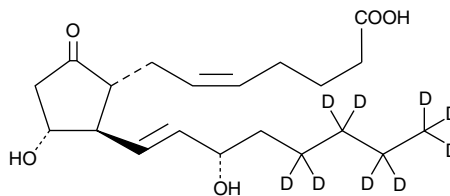
# Product Information



## Prostaglandin E<sub>2</sub>-d<sub>9</sub>

Item No. 10581

**CAS Registry No.:** 1356347-42-6  
**Formal Name:** 9-oxo-11 $\alpha$ ,15S-dihydroxy-prosta-5Z,13E-dien-1-oic-17,17,18,18,19,19,20,20,20-d<sub>9</sub> acid  
**Synonyms:** Dinoprostone-d<sub>9</sub>, PGE<sub>2</sub>-d<sub>9</sub>  
**MF:** C<sub>20</sub>H<sub>23</sub>D<sub>9</sub>O<sub>5</sub>  
**FW:** 361.5  
**Chemical Purity:**  $\geq$ 95%  
**Deuterium Incorporation:**  $\geq$ 99% deuterated forms (d<sub>1</sub>-d<sub>9</sub>);  $\leq$ 1% d<sub>0</sub>  
**Stability:**  $\geq$ 1 year at -20°C  
**Supplied as:** A solution in methyl acetate



### Laboratory Procedures

Prostaglandin E<sub>2</sub>-d<sub>9</sub> (PGE<sub>2</sub>-d<sub>9</sub>) contains nine deuterium atoms at the 17, 17', 18, 18', 19, 19', 20, 20, and 20' positions. It is intended for use as an internal standard for the quantification of PGE<sub>2</sub> by GC- or LC-mass spectrometry (MS). For long term storage, we suggest that PGE<sub>2</sub>-d<sub>9</sub> be stored as supplied at -20°C. It should be stable for at least one year.

PGE<sub>2</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 PGE<sub>2</sub>-d<sub>9</sub> in these solvents is approximately 100 mg/ml.

PGE<sub>2</sub>-d<sub>9</sub> is used as an internal standard for the quantification of PGE<sub>2</sub> 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).

PGE<sub>2</sub> is one of the primary cyclooxygenase products of arachidonic acid and one of the most widely investigated PGs. Its activity influences inflammation, fertility and parturition, gastric mucosal integrity, and immune modulation.<sup>1-4</sup> The effects of PGE<sub>2</sub> are transduced by at least four distinct receptors designated EP<sub>1</sub>, EP<sub>2</sub>, EP<sub>3</sub>, and EP<sub>4</sub>.<sup>5</sup> Affinity constants (K<sub>d</sub>) of PGE<sub>2</sub> for these receptors range from 1-10 nM depending on the receptor subtype and tissue.

### References

1. Willis, A.L. and Cornelsen, M. Repeated injection of prostaglandin E<sub>2</sub> in rat paws induces chronic swelling and a marked decrease in pain threshold. *Prostaglandins* **3**, 353-357 (1973).
2. Jackson, G.M., Sharp, H.T., and Varner, M.W. Cervical ripening before induction of labor: A randomized trial of prostaglandin E<sub>2</sub> gel versus low-dose oxytocin. *Am. J. Obstet. Gynecol.* **171**, 1092-1096 (1994).
3. Robert, A., Schultz, J.R., Nezamis, J.E., *et al.* Gastric antisecretory and antiulcer properties of PGE<sub>2</sub>, 15-methyl PGE<sub>2</sub>, and 16,16-dimethyl PGE<sub>2</sub>. Intravenous, oral and intrajejunal administration. *Gastroenterology* **70**, 359-370 (1976).
4. Arvind, P., Papavassiliou, E.D., Tsioulas, G.J., *et al.* Prostaglandin E<sub>2</sub> down-regulates the expression of HLA-DR antigen in human colon adenocarcinoma cell lines. *Biochemistry* **34**, 5604-5609 (1995).
5. Coleman, R.A., Smith, W.L., and Narumiya, S. Classification of prostanoid receptors: Properties, distribution, and structure of the receptors and their subtypes. *Pharmacol. Rev.* **46**, 205-229 (1994).

### Related Products

For a list of related products please visit: [www.caymanchem.com/catalog/10581](http://www.caymanchem.com/catalog/10581)

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

#### 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 Safety Data Sheet, which has been sent via email to your institution.

#### WARRANTY AND LIMITATION OF REMEDY

Cayman Chemical Company makes **no warranty or guarantee** of any kind, whether written or oral, expressed or implied, including without limitation, any warranty of fitness for a particular purpose, suitability and merchantability, which extends beyond the description of the chemicals hereof. Cayman warrants only to the original customer that the material will meet our specifications at the time of delivery.

Cayman will carry out its delivery obligations with due care and skill. Thus, in no event will Cayman have any obligation or liability, whether in tort (including negligence) or in contract, for any direct, indirect, incidental or consequential damages, even if Cayman is informed about their possible existence.

This limitation of liability does not apply in the case of intentional acts or negligence of Cayman, its directors or its employees.

Buyer's **exclusive remedy** and Cayman's sole liability hereunder shall be limited to a **refund** of the purchase price, or at Cayman's option, the **replacement**, at no cost to Buyer, of all material that does not meet our specifications.

Said refund or replacement is conditioned on Buyer giving written notice to Cayman within thirty (30) days after arrival of the material at its destination. Failure of Buyer to give said notice within thirty (30) days shall constitute a waiver by Buyer of all claims hereunder with respect to said material.

For further details, please refer to our Warranty and Limitation of Remedy located on our website and in our catalog.

Copyright Cayman Chemical Company, 02/03/2014

### Cayman Chemical

**Mailing address**  
1180 E. Ellsworth Road  
Ann Arbor, MI  
48108 USA

**Phone**  
(800) 364-9897  
(734) 971-3335

**Fax**  
(734) 971-3640

**E-Mail**  
custserv@caymanchem.com

**Web**  
[www.caymanchem.com](http://www.caymanchem.com)