



# 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>4</sub> MaxSpec<sup>®</sup> Standard Item No. 10007273

**Formal Name:** 9-oxo-11 $\alpha$ ,15S-dihydroxy-prosta-5Z,13E-dien-1-oic-3,3,4,4-d<sub>4</sub> acid

**Synonyms:** Dinoprostone-d<sub>4</sub>, PGE<sub>2</sub>-d<sub>4</sub>

**MF:** C<sub>20</sub>H<sub>28</sub>D<sub>4</sub>O<sub>5</sub>

**FW:** 356.5

**Purity:** ≥95%

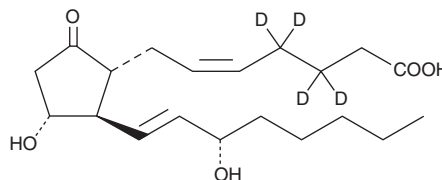
**Supplied as:** A solution in methyl acetate; in a deactivated glass ampule

**Concentration:** 10 µg/ml (nominal); see certificate of analysis for verified concentration

**Storage:** -20°C

**Stability:** ≥3 years; *Stability testing is ongoing to ensure concentration accuracy. The certificate of analysis and product expiry date will be updated upon completion of testing.*

**Special Conditions:** Store upright and unopened at -20°C. Warm to room temperature prior to opening. Light sensitive.



### Description

Prostaglandin E<sub>2</sub>-d<sub>4</sub> (PGE<sub>2</sub>-d<sub>4</sub>) is intended for use as an internal standard for the quantification of PGE<sub>2</sub> (Item No. 14010) by GC- or LC-MS. PGE<sub>2</sub> is one of the primary cyclooxygenase products of arachidonic acid (Item No. 90010) and one of the most widely investigated prostaglandins. 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> The 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.

PGE<sub>2</sub>-d<sub>4</sub> MaxSpec<sup>®</sup> standard is a quantitative grade standard of PGE<sub>2</sub>-d<sub>4</sub> (Item No. 314010) that has been prepared specifically for mass spectrometry or any application where quantitative reproducibility is required. The solution has been prepared gravimetrically and is supplied in a deactivated glass ampule sealed under argon. The concentration was verified by comparison to an independently prepared calibration standard. The verified concentration is provided on the certificate of analysis. This PGE<sub>2</sub>-d<sub>4</sub> MaxSpec<sup>®</sup> standard is guaranteed to meet identity, purity, stability, and concentration specifications and is provided with a batch-specific certificate of analysis. Ongoing stability testing is performed to ensure the concentration remains accurate throughout the shelf life of the product. **Note:** The amount of solution added to the vial is in excess of the listed amount. Therefore, it is necessary to accurately measure volumes for preparation of calibration standards. Follow recommended storage and handling conditions to maintain product quality.

### 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**(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**(4), 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**(3), 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**(16), 5604-5609 (1995).
5. Coleman, R.A., Smith, W.L., and Narumiya, S. International Union of Pharmacology classification of prostanoid receptors: Properties, distribution, and structure of the receptors and their subtypes. *Pharmacol. Rev.* **46**(2), 205-229 (1994).

#### 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.

Copyright Cayman Chemical Company, 08/23/2021

#### CAYMAN CHEMICAL

1180 EAST ELLSWORTH RD  
ANN ARBOR, MI 48108 · USA

**PHONE:** [800] 364-9897  
[734] 971-3335

**FAX:** [734] 971-3640

CUSTSERV@CAYMANCHEM.COM  
WWW.CAYMANCHEM.COM