

# PRODUCT INFORMATION



## Prostaglandin E<sub>2</sub> MaxSpec® Standard Item No. 10007211

CAS Registry No.: 363-24-6

Formal Name: 9-oxo-11 $\alpha$ ,15S-dihydroxy-prosta-5Z,13E-dien-1-oic acid

Synonyms: Dinoprostone, PGE<sub>2</sub>

MF: C<sub>20</sub>H<sub>32</sub>O<sub>5</sub>

FW: 352.5

Purity:  $\geq$ 95%

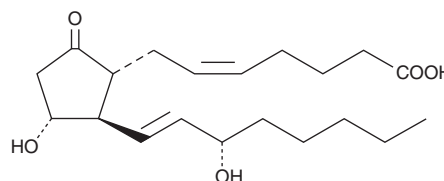
Supplied as: A solution in methyl acetate; in a deactivated glass ampule

Concentration: 100  $\mu$ g/ml (nominal); see certificate of analysis for verified concentration

Storage: -20°C

Stability:  $\geq$ 5 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> (PGE<sub>2</sub>) is one of the primary COX products of arachidonic acid (Item No. 90010) 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.

PGE<sub>2</sub> MaxSpec® standard is a quantitative grade standard of PGE<sub>2</sub> (Item No. 14010) 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. This PGE<sub>2</sub> MaxSpec® 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. *Prostaglandins* **3(3)**, 353-357 (1973).
2. Jackson, G.M., Sharp, H.T., and Varner, M.W. *Am. J. Obstet. Gynecol.* **171(4)**, 1092-1096 (1994).
3. Robert, A., Schultz, J.R., Nezamis, J.E., et al. *Gastroenterology* **70(3)**, 359-370 (1976).
4. Arvind, P., Papavassiliou, E.D., Tsioulis, G.J., et al. *Biochemistry* **34(16)**, 5604-5609 (1995).
5. Coleman, R.A., Smith, W.L., and Narumiya, S. *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

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