

# Certificate of Analysis

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**Product Name:** 16,16-Dimethyl Prostaglandin E2

**Catalog No.:** 4027

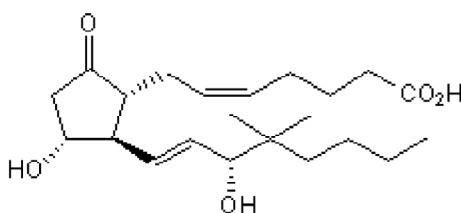
**Batch No.:** 10

**CAS Number:** 39746-25-3

**IUPAC Name:** (5Z,11α,13E,15R)-11,15-Dihydroxy-16,16-dimethyl-9-oxo-prosta-5,13-dien-1oic acid

## 1. PHYSICAL AND CHEMICAL PROPERTIES

|                                   |                                                             |
|-----------------------------------|-------------------------------------------------------------|
| <b>Batch Molecular Formula:</b>   | C <sub>22</sub> H <sub>36</sub> O <sub>5</sub>              |
| <b>Batch Molecular Weight:</b>    | 380.52                                                      |
| <b>Physical Appearance:</b>       | liquid                                                      |
| <b>Solubility:</b>                | Soluble in methyl acetate (supplied pre-dissolved -10mg/ml) |
| <b>Storage:</b>                   | Store at -80°C                                              |
| <b>Batch Molecular Structure:</b> |                                                             |



## 2. ANALYTICAL DATA

|                       |                           |
|-----------------------|---------------------------|
| <b>HPLC:</b>          | Shows 95.8 % purity       |
| <b>Mass Spectrum:</b> | Consistent with structure |

Caution - Not Fully Tested • Research Use Only • Not For Human or Veterinary Use

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**Description:**

16,16-Dimethyl Prostaglandin E2 is a synthetic derivative of prostaglandin E<sub>2</sub> (Cat. No. 2296). Increases embryonic stem cell (ESC) hematopoietic colony formation in mouse bone marrow. Also induces an increase in hematopoietic stem cell (HSC) numbers and enhances Wnt activity within the HSC population in zebrafish embryos.

**Physical and Chemical Properties:**

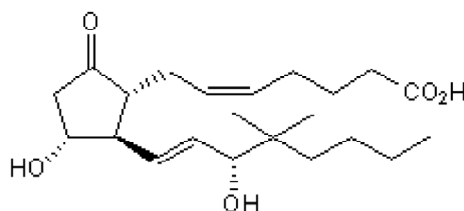
Batch Molecular Formula: C<sub>22</sub>H<sub>36</sub>O<sub>5</sub>

Batch Molecular Weight: 380.52

Physical Appearance: liquid

**Minimum Purity:** ≥95%

**Batch Molecular Structure:**



**Storage:** Store at -80°C

**CAUTION** - This product is light sensitive and we recommend that the solid material and any solutions obtained are protected from exposure to light.

**Solubility & Usage Info:**

Soluble in methyl acetate (supplied pre-dissolved -10mg/ml)

This compound is supplied pre-dissolved in Methyl acetate (10mg/ml). To change the solvent, evaporate the methyl acetate under a gentle stream of nitrogen and immediately add the chosen solvent (preferably purged with nitrogen beforehand). The solubility of 16,16-Dimethyl-PGE2 is greater than 100mM in both DMSO and Ethanol, and about 10mM in PBS. Solutions in DMSO and Ethanol can be kept at -80°C for at least 6 months. Use aqueous solutions within 12 hours.

**Stability and Solubility Advice:**

Some solutions can be difficult to obtain and can be encouraged by rapid stirring, sonication or gentle warming (in a 45-60°C water bath).

Information concerning product stability, particularly in solution, has rarely been reported and in most cases we can only offer a general guide. \*Unless contradicted by product-specific protocols or instructions, our standard recommendations apply:

**SOLIDS:** Provided storage is as stated on the product label and the vial is kept tightly sealed, the product can be stored for up to 6 months from date of receipt.

**SOLUTIONS:** We recommend that stock solutions, once prepared, are stored aliquoted in tightly sealed vials at -20°C or below and used within 1 month. Wherever possible solutions should be made up and used on the same day.

**References:**

**Heffner *et al*** (2018) Prostaglandin E<sub>2</sub> increases lentiviral vector transduction efficiency of adult human hematopoietic stem and progenitor cells. *Mol. Ther.* **26** 320. PMID: 29102562 .

**Goessling *et al*** (2009) Genetic interaction of PGE<sub>2</sub> and wnt signaling regulates developmental specification of stem cells and regeneration. *Cell.* **136** 1136. PMID: 19303855.

**Lord *et al*** (2007) Prostaglandin E<sub>2</sub>: making more of your marrow. *Cell Cycle.* **6** 3054. PMID: 18075310.

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