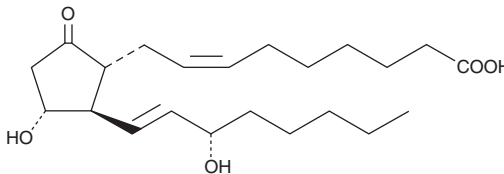


# PRODUCT INFORMATION

## 1a,1b-dihomo Prostaglandin E<sub>2</sub>

Item No. 18665

**CAS Registry No.:** 26198-80-1  
**Formal Name:** 9-oxo-11 $\alpha$ ,15S-dihydroxy-1a,1b-dihomo-prosta-5Z,13E-dien-1-oic acid  
**Synonym:** 1a,1b-dihomo PGE<sub>2</sub>  
**MF:** C<sub>22</sub>H<sub>36</sub>O<sub>5</sub>  
**FW:** 380.5  
**Purity:**  $\geq 98\%$   
**Supplied as:** A crystalline solid  
**Storage:** -20°C  
**Stability:**  $\geq 4$  years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

### Laboratory Procedures

1a,1b-dihomo Prostaglandin E<sub>2</sub> (1a,1b-dihomo PGE<sub>2</sub>) is supplied as a crystalline solid. A stock solution may be made by dissolving the 1a,1b-dihomo PGE<sub>2</sub> in the solvent of choice, which should be purged with an inert gas. 1a,1b-dihomo PGE<sub>2</sub> is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of 1a,1b-dihomo PGE<sub>2</sub> in these solvents is approximately 100 mg/ml.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. Organic solvent-free aqueous solutions of 1a,1b-dihomo PGE<sub>2</sub> can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of 1a,1b-dihomo PGE<sub>2</sub> in PBS (pH 7.2) is approximately 5 mg/ml. We do not recommend storing the aqueous solution for more than one day.

### Description

1a,1b-dihomo PGE<sub>2</sub> is a rare polyunsaturated fatty acid first identified in extracts of sheep vesicular gland microsomes, known to contain COX, incubated with adrenic acid (Item No. 90300).<sup>1</sup> 1a,1b-dihomo PGE<sub>2</sub> has also been identified in conditioned media of RAW 264.7 macrophages stimulated with endotoxin and arachidonic acid (AA; Item No. 90010).<sup>2</sup> This product is thought to be produced by elongation of AA to adrenic acid, which is then metabolized sequentially by COX and PGE synthase.<sup>2</sup>

### References

1. Tobias, L.D., Vane, F.M., and Paulsrud, J.R. The biosynthesis of 1a,1b-dihomo-PGE<sub>2</sub> and 1a,1b-dihomo-PGF<sub>2 $\alpha$</sub>  from 7,10,13,16-docosatetraenoic acid by an acetone-pentane powder of sheep vesicular gland microsomes. *Prostaglandins* **10**(3), 443-468 (1975).
2. Harkewicz, R., Fahy, E., Andreyev, A., et al. Arachidonate-derived dihomoprostaglandin production observed in endotoxin-stimulated macrophage-like cells. *J. Biol. Chem.* **282**(5), 2899-2910 (2007).

#### 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.

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