# PRODUCT INFORMATION

## 1a,1b-dihomo Prostaglandin $E_2$

*Item No. 18665*

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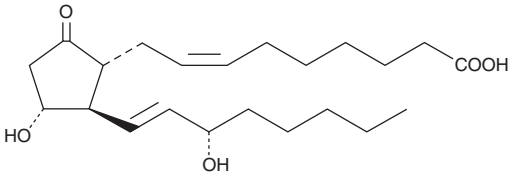
| **CAS Registry No.:** | 26198-80-1 |
| **Formal Name:** | 9-oxo-11α,15S-dihydroxy-1a,1b-dihomo-prosta-5Z,13E-dien-1-oic acid |
| **Synonym:** | 1a,1b-dihomo $PGE_2$ |
| **MF:** | $C_{22}H_{36}O_5$ |
| **FW:** | 380.5 |
| **Purity:** | ≥98% |
| **Supplied as:** | A crystalline solid |
| **Storage:** | -20°C |
| **Stability:** | ≥4 years |




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

### Laboratory Procedures

1a,1b-dihomo Prostaglandin $E_2$ (1a,1b-dihomo $PGE_2$) is supplied as a crystalline solid. A stock solution may be made by dissolving the 1a,1b-dihomo $PGE_2$ in the solvent of choice, which should be purged with an inert gas. 1a,1b-dihomo $PGE_2$ is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of 1a,1b-dihomo $PGE_2$ 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 $PGE_2$ can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of 1a,1b-dihomo $PGE_2$ 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 $PGE_2$ 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).[1] 1a,1b-dihomo $PGE_2$ has also been identified in conditioned media of RAW 264.7 macrophages stimulated with endotoxin and arachidonic acid (AA; Item No. 90010).[2] This product is thought to be produced by elongation of AA to adrenic acid, which is then metabolized sequentially by COX and PGE synthase.[2]

### References


1. Tobias, L.D., Vane, F.M., and Paulsrud, J.R. The biosynthesis of 1a,1b-dihomo-$PGE_2$ and 1a,1b-dihomo-$PGF_{2\alpha}$ 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).





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