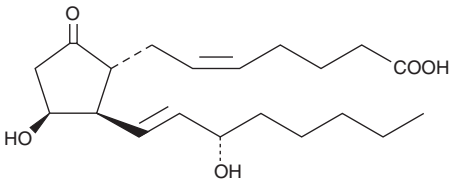
PRODUCT INFORMATION

11β-Prostaglandin E_2

Item No. 14510

CAS Registry No.:	38310-90-6
Formal Name:	9-oxo-11β,15S-dihydroxy-prosta-5Z,13E-dien-1-oic acid
Synonyms:	11β-PGE_2, 11-*epi* PGE_2
MF:	$C_{20}H_{32}O_5$
FW:	352.5
Purity:	≥98%
Supplied as:	A solution in methyl acetate
Storage:	-20°C
Stability:	≥1 year



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

Laboratory Procedures

11β-Prostaglandin E_2 (11β-PGE_2) is supplied as a solution in methyl acetate. To change the solvent, simply evaporate the methyl acetate under a gentle stream of nitrogen and immediately add the solvent of choice. Solvents such as ethanol, DMSO, and dimethyl formamide purged with an inert gas can be used. The solubility of 11β-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. If an organic solvent-free solution of 11β-PGE_2 is needed, it can be prepared by evaporating the methyl acetate and directly dissolving the neat oil in aqueous buffers. The solubility of 11β-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

11β-PGE_2 is the C-11 epimer of PGE_2. It is a moderate inhibitor of PGE_2 binding to rat hypothalamic membranes with a K_i value of 53 nM.[1] 11β-PGE_2 also stimulates bone resorption in rats at concentrations of 10 to 1,000 nM which is similar to PGE_2.[2] 11β-PGE_2 inhibits PGE_2 binding to the prostaglandin transporter protein with a K_i of 56 nM.[3]

References

1. Dray, F. and Heaulme, M. Prostaglandins of the E series inhibit release of noradrenaline in rat hypothalamus by a mechanism unrelated to classical α_2 adrenergic presynaptic inhibition. *Neuropharmacology* **23(4)**, 457-462 (1984).
2. Raisz, L.G. and Woodiel, F.N. Effect of alterations in the cyclopentane ring on bone resorptive activity of prostaglandin. *Prostaglandins* **37(2)**, 229-235 (1989).
3. Itoh, S., Lu, R., Bao, Y., *et al*. Structural determinants of substrates for the prostaglandin transporter PGT. *Mol. Pharmacol.* **50(4)**, 736-742 (1996).

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