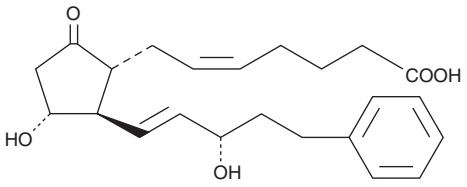
PRODUCT INFORMATION

17-phenyl trinor Prostaglandin E_2

Item No. 14810

CAS Registry No.: 38315-43-4
Formal Name: (5Z)-7-[(1R,2R,3R)-3-hydroxy-2-[(1E,3S)-3-hydroxy-5-phenyl-1-penten-1-yl]-5-oxocyclopentyl]-5-heptenoic acid
Synonym: 17-phenyl trinor PGE_2
MF: $C_{23}H_{30}O_5$
FW: 386.5
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

17-phenyl trinor Prostaglandin E_2 (17-phenyl trinor PGE_2) is supplied as a crystalline solid. A stock solution may be made by dissolving the 17-phenyl trinor PGE_2 in the solvent of choice, which should be purged with an inert gas. 17-phenyl trinor PGE_2 is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of 17-phenyl trinor 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 17-phenyl trinor PGE_2 can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of 17-phenyl trinor PGE_2 in PBS (pH 7.2) is approximately 0.8 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

17-phenyl trinor PGE_2 is a synthetic analog of PGE_2. It is an EP_1 and EP_3 receptor agonist.[1,2] 17-phenyl trinor PGE_2 causes contraction of the guinea pig ileum at a concentration of 11 µM.[1] It is slightly less potent than PGE_2 in stimulating gerbil colon and rat uterus.[2] With an ED_{50} value of 350 µg/kg, 17-phenyl trinor PGE_2 is 4.4 times more potent than PGE_2 as an antifertility agent in hamsters.[2]

References

1. Lawrence, R.A., Jones, R.L., and Wilson, N.H. Characterization of receptors involved in the direct and indirect actions of prostaglandins E and I on the guinea-pig ileum. *Br. J. Pharmacol.* **105(2)**, 271-278 (1992).
2. Miller, W.L., Weeks, J.R., Lauderdale, J.W., *et al.* Biological activities of 17-phenyl-18,19,20-trinorprostaglandins. *Prostaglandins* **9(1)**, 9-18 (1975).

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