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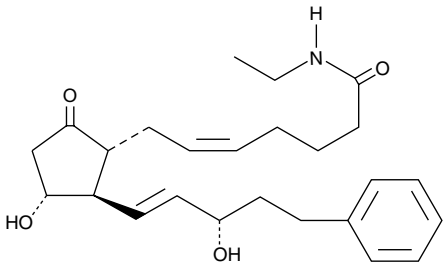
Product Information

17-phenyl trinor Prostaglandin E_2 ethyl amide

Item No. 13532

CAS Registry No.: 1219032-20-8
Formal Name: N-ethyl-9-oxo-11α,15S-dihydroxy-17-phenyl-18,19,20-trinor-prosta-5Z,13E-dien-1-amide
Synonym: 17-phenyl trinor PGE_2 ethyl amide
MF: $C_{25}H_{35}NO_4$
FW: 413.6
Purity: ≥98%
Stability: ≥1 year at -20°C
Supplied as: A solution in ethanol



Laboratory Procedures

For long term storage, we suggest that 17-phenyl trinor prostaglandin E_2 ethyl amide (17-phenyl trinor PGE_2 ethyl amide) be stored as supplied at -20°C. It should be stable for at least one year.

17-phenyl trinor PGE_2 ethyl amide is supplied as a solution in ethanol. To change the solvent, simply evaporate the ethanol under a gentle stream of nitrogen and immediately add the solvent of choice. Solvents such as DMSO and dimethyl formamide purged with an inert gas can be used. The solubility of 17-phenyl trinor PGE_2 ethyl amide 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 17-phenyl trinor PGE_2 ethyl amide is needed, it can be prepared by evaporating the ethanol and directly dissolving the neat oil in aqueous buffers. The solubility of 17-phenyl trinor PGE_2 ethyl amide in PBS, pH 7.2, is approximately 0.5 mg/ml. We do not recommend storing the aqueous solution for more than one day.

17-phenyl trinor PGE_2 ethyl amide is derived from 17-phenyl trinor PGE_2, a synthetic analog of PGE_2 that acts as an agonist of EP_1 and EP_3 receptors in mice (K_i = 14 and 3.7 nM, respectively) and EP_1, EP_3, and EP_4 in rats (K_i = 25, 4.3, and 54 nM, respectively).[1,2] 17-phenyl trinor PGE_2 causes contraction of guinea pig ileum at a concentration of 11 µM and is 4.4 times more potent than PGE_2 as an antifertility agent in hamsters.[3,4] Modification of the C-1 carboxyl group to an ethyl amide serves to increase lipid solubility, thereby improving uptake into tissues and further lowering the effective concentration. Ethyl amide groups are then removed by amidases, regenerating the active free acid.

References

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2. Boie, Y., Stocco, R., Sawyer, N., *et al.* Molecular cloning and characterization of the four rat prostaglandin E_2 prostanoid receptor subtypes. *Eur. J. Pharmacol.* **340**, 227-241 (1997).
3. 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**, 271-278 (1992).
4. Miller, W.L., Weeks, J.R., Lauderdale, J.W., *et al.* Biological activities of 17-phenyl-18,19,20-trinor prostaglandins. *Prostaglandins* **9**, 9-18 (1975).

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