

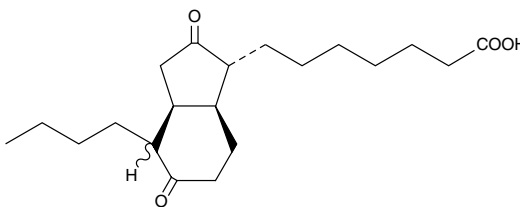
Product Information



Bicyclo Prostaglandin E₁

Item No. 13530

Formal Name: 11-deoxy-13,14-dihydro-15-keto-11 β ,16 γ -cycloprostaglandin E₁
Synonym: Bicyclo PGE₁
MF: C₂₀H₃₂O₄
FW: 336.5
Purity: \geq 98%
Stability: \geq 1 year at -20°C
Supplied as: A solution in methyl acetate



Laboratory Procedures

For long term storage, we suggest that bicyclo prostaglandin E₁ (bicyclo PGE₁) be stored as supplied at -20°C. It should be stable for at least one year.

Bicyclo PGE₁ 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 bicyclo PGE₁ in these solvents is approximately 25 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 bicyclo PGE₁ is needed, it can be prepared by evaporating the methyl acetate and directly dissolving the neat oil in aqueous buffers. The solubility of bicyclo PGE₁ in PBS (pH 7.2) is approximately 1.4 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Bicyclo PGE₁ is a stable, base-catalyzed transformation product of the PGE₁ metabolite 13,14-dihydro-15-keto PGE₁. 13,14-dihydro-15-keto PGE₁ itself is a metabolite of PGE₁^{1,2} found in human plasma at a median level of 10 pg/ml.³ Due to the inherent instability of 13,14-dihydro-15-keto PGE₁, it is advisable to quantify it as bicyclo PGE₁ to estimate PGE₁ biosynthesis or metabolism *in vivo*.

References

1. Hamberg, M. and Samuelsson, B. On the metabolism of prostaglandins E₁ and E₂ in man. *J. Biol. Chem.* **246**, 6713-6721 (1971).
2. Peskar, B.A., Cawello, W., Rogatti, W., *et al.* On the metabolism of prostaglandin E₁ administered intravenously to human volunteers. *J. Physiol. Pharmacol.* **42**, 327-331 (1991).
3. Leonhardt, A., Krauss, M., Gieler, U., *et al.* *In vivo* formation of prostaglandin E₁ and prostaglandin E₂ in atopic dermatitis. *Br. J. Dermatol.* **136**, 337-340 (1997).

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