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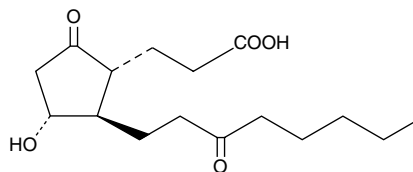
Product Information



13,14-dihydro-15-keto-tetranor Prostaglandin E₂

Item No. 13101

CAS Registry No.: 20675-85-8
Formal Name: 9,15-dioxo-11 α -hydroxy-2,3,4,5-tetranor-prostanoic acid
Synonym: 13,14-dihydro-15-keto-tetranor PGE₂
MF: C₁₆H₂₆O₅
FW: 298.4
Purity: \geq 95%
Stability: \geq 6 months at -20°C
Supplied as: A solution in ethanol



Laboratory Procedures

For long term storage, we suggest that 13,14-dihydro-15-keto-tetranor prostaglandin E₂ (13,14-dihydro-15-keto-tetranor PGE₂) be stored as supplied at -20°C. It should be stable for at least six months.

13,14-dihydro-15-keto-tetranor PGE₂ 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 13,14-dihydro-15-keto-tetranor PGE₂ in these solvents is approximately 50 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 13,14-dihydro-15-keto-tetranor PGE₂ is needed, it can be prepared by evaporating the ethanol and directly dissolving the neat oil in aqueous buffers. The solubility of 13,14-dihydro-15-keto-tetranor PGE₂ in PBS, pH 7.2, is approximately 1 mg/ml. We do not recommend storing the aqueous solution for more than one day.

A common metabolic pathway for several PGs, including PGE₂, involves the reduction of the double bond between C-13 and C-14 and oxidation of the hydroxyl group at C-15, producing 13,14-dihydro-15-keto PGs. The removal of four carbons at the α -terminus and oxidation of the terminal ω -carbon produces the abundant urinary metabolites, including tetranor-PGEM.¹ 13,14-dihydro-15-keto-tetranor PGE₂ is a potential metabolite of PGE₂. It would be produced from the known metabolite 13,14-dihydro-15-keto PGE₂ (Item No. 14650), which is known to have a short plasma half-life.²⁻⁴

References

1. Hamberg, M. Inhibition of prostaglandin synthesis in man. *Biochem. Biophys. Res. Commun.* **49**, 720-726 (1972).
2. Bothwell, W., Verburg, M., Wynalda, M., *et al.* A radioimmunoassay for the unstable pulmonary metabolites of prostaglandin E₁ and E₂: An indirect index of their *in vivo* disposition and pharmacokinetics. *J. Pharmacol. Exp. Ther.* **220**, 229-235 (1982).
3. Fitzpatrick, F.A., Aguirre, R., Pike, J.E., *et al.* The stability of 13,14-dihydro-15 keto-PGE₂. *Prostaglandins* **19**, 917-931 (1980).
4. Granström, E., Hamberg, M., Hansson, G., *et al.* Chemical instability of 15-keto-13,14-dihydro-PGE₂: The reason for low assay reliability. *Prostaglandins* **19**, 933-945 (1980).

Related Products

For a list of related products please visit: www.caymanchem.com/catalog/13101

WARNING: THIS PRODUCT IS FOR LABORATORY RESEARCH ONLY. NOT FOR ADMINISTRATION TO HUMANS. NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

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