

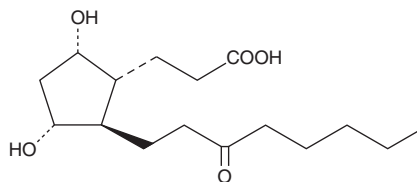
PRODUCT INFORMATION



13,14-dihydro-15-keto-tetranor Prostaglandin F_{1α}

Item No. 13571

CAS Registry No.: 24379-94-0
Formal Name: (1R,2R,3R,5S)-3,5-dihydroxy-2-(3-oxooctyl)-cyclopentanepropanoic acid
MF: C₁₆H₂₈O₅
FW: 300.4
Purity: ≥98%
Supplied as: A solution in ethanol
Storage: -20°C
Stability: ≥1 year



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

Laboratory Procedures

13,14-dihydro-15-keto-tetranor Prostaglandin F_{1α} (13,14-dihydro-15-keto-tetranor PGF_{1α}) 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 PGF_{1α} in these solvents is approximately 50 mg/ml, respectively.

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 PGF_{1α} 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 PGF_{1α} in PBS (pH 7.2) is approximately 1 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

The metabolism of F series prostaglandins (PGs), including PGF_{1α} and PGF_{2α}, commonly begins with 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-PGFM.¹⁻⁴ 13,14-dihydro-15-keto tetranor PGF_{1α} is a potential metabolite of either PGF_{1α} or PGF_{2α} and likely precursor to tetranor-PGFM.

References

1. Granström, E. and Samuelsson, B. The structure of a urinary metabolite of prostaglandin F_{2α} in man. *J. Am. Chem. Soc.* **91(12)**, 3398-3400 (1969).
2. Granström, E. and Samuelsson, B. On the metabolism of prostaglandin F_{2α} in female subjects. *J. Biol. Chem.* **246(17)**, 5254-5263 (1971).
3. Hamberg, M. Quantitative studies on prostaglandin synthesis in man III. Excretion of the major urinary metabolite of prostaglandins F_{1α} and F_{2α} during pregnancy. *Life Sci.* **14(2)**, 247-252 (1974).
4. Hamberg, M. Quantitative studies on prostaglandin synthesis in man II. Determination of the major urinary metabolite of prostaglandins F_{1α} and F_{2α}. *Anal. Biochem.* **55(2)**, 368-378 (1973).

WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

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