20-hydroxy Prostaglandin F$_{2\alpha}$

Catalog No. 16950

CAS Registry No: 57930-92-4
Formal Name: 9α,11α,15S,20-tetrahydroxy-prosta-
5Z,13E-dien-1-oic acid
Synonym: 20-hydroxy PGF$_{2\alpha}$
MF: C$_{34}$H$_{53}$O$_6$
FW: 570.5
Purity: ≥98%
Stability: ≥1 year at -20°C
Supplied as: A solution in methyl acetate

Laboratory Procedures

For long term storage, we suggest that 20-hydroxy prostaglandin F$_{2\alpha}$ (20-hydroxy PGF$_{2\alpha}$) be stored as supplied at -20°C. It should be stable for at least one year.

20-hydroxy PGF$_{2\alpha}$ 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 DMSO, ethanol, and dimethyl formamide purged with an inert gas can be used. The solubility of 20-hydroxy PGF$_{2\alpha}$ 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 may be insignificant since organic solvents may have physiological effects at low concentrations. If an organic solvent-free solution of 20-hydroxy PGF$_{2\alpha}$ is needed, it can be prepared by evaporating the methyl acetate and directly dissolving the neat oil in aqueous buffers. The solubility of 20-hydroxy PGF$_{2\alpha}$ in PBS (pH 7.2) is approximately 10 mg/ml.

Store aqueous solutions of 20-hydroxy PGF$_{2\alpha}$ on ice and use within 12 hours of preparation.

20-hydroxy PGF$_{2\alpha}$ is the $\alpha$-oxidation product of PGF$_{2\alpha}$. Cultured type II alveolar cells from pregnant rabbits metabolize exogenous PGF$_{2\alpha}$ via microsomal cytochrome P450 $\alpha$-oxidation, producing 20-hydroxy PGF$_{2\alpha}$ and its 15-hydroxy PGDH metabolites. Cells from male rabbits exhibit only the 15-hydroxy PGDH pathway.$^{1}$

Reference


Related Products

Prostaglandin F$_{2\alpha}$ • Cat. No. 16010 • 12(R)-hydroxy-16-heptadecynoic acid - Cat. No. 31560 • 12(S)-hydroxy-16-heptadecynoic acid - Cat. No. 31570 • 20-hydroxy Prostaglandin F$_{2\alpha}$ Lipid Maps MS Standard - Cat. No. 10007229

MATERIAL SAFETY DATA

This material should be considered hazardous until information to the contrary becomes available. Do not ingest, swallow, or inhale. Do not get in eyes, on skin, or on clothing. Wash thoroughly after handling. This information contains some, but not all, of the information required for the safe and proper use of this material. Before use, the user must review the complete Material Safety Data Sheet, which has been sent under separate cover to the MSDS supervisor at your institution.

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Cayman Chemical makes no warranty or guarantee of any kind, whether written or oral, expressed or implied, including without limitation, any warranty of fitness for a particular purpose, suitability and merchantability, which extends beyond the description of the chemicals hereof. Cayman warrants only to the original customer that the material will meet our specifications at the time of delivery.

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This limited warranty does not apply in the case of intentional acts or negligence of Cayman, its directors or its employees.

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