PRODUCT INFORMATION

15-keto Prostaglandin F$_{2\alpha}$ Lipid Maps® MS Standard
Item No. 10007227

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CAS Registry No.: 35850-13-6
Formal Name: 9α,11α-dihydroxy-15-oxo-prosta-5Z,13E-dien-1-oic acid
Synonym: 15-keto PGF$_{2\alpha}$
MF: C$_{20}$H$_{32}$O$_5$
FW: 352.5
Purity: ≥98%
Supplied as: A solution in methyl acetate
Storage: -20°C
Stability: As supplied, 2 years from the QC date provided on the Certificate of Analysis, when stored properly

Laboratory Procedures

15-keto Prostaglandin F$_{2\alpha}$ (15-keto PGF$_{2\alpha}$) is supplied as a solution in methyl acetate. To change the solvent, evaporate the methyl acetate under a gentle stream of nitrogen and immediately add the solvent of choice. Solvents such as ethanol, DMSO, or dimethyl formamide purged with an inert gas can be used. The solubility of 15-keto 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 is insignificant, since organic solvents may have physiological effects at low concentrations. If an organic solvent-free solution of 15-keto PGF$_{2\alpha}$ is needed, evaporate the methyl acetate under a gentle stream of nitrogen and dissolve the neat oil in the buffer of choice. The solubility of 15-keto PGF$_{2\alpha}$ in PBS, pH 7.2, is approximately 10 mg/ml. The solubility of 15-keto PGF$_{2\alpha}$ in 10 mM aqueous Na$_2$CO$_3$ is approximately 6 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

15-keto PGF$_{2\alpha}$ is the first metabolite of PGF$_{2\alpha}$ in the 15-hydroxy PGDH pathway. It is one of the critical components in the goldfish and Atlantic salmon postovulatory pheromone. 1,2 15-keto PGF$_{2\alpha}$ stimulates the male goldfish and salmon olfactory senses with detection thresholds of 10$^{-12}$ and 10$^{-8}$ M, respectively. 1,2 15-keto PGF$_{2\alpha}$ is 10-fold less active than PGF$_{2\alpha}$ in decreasing rabbit intraocular pressure. 3

References