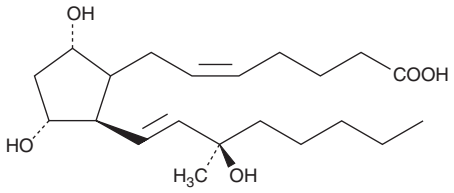
PRODUCT INFORMATION

15(R)-15-methyl Prostaglandin $F_{2\alpha}$

Item No. 16730

CAS Registry No.: 35864-81-4
Formal Name: 9α,11α,15R-trihydroxy-15-methyl-prosta-5Z,13E-dien-1-oic acid
Synonym: 15(R)-15-methyl $PGF_{2\alpha}$
MF: $C_{21}H_{36}O_5$
FW: 368.5
Purity: ≥95%
Supplied as: A solution in methyl acetate
Storage: -20°C
Stability: ≥2 years



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

Laboratory Procedures

15(R)-15-methyl Prostaglandin $F_{2\alpha}$ (15(R)-15-methyl $PGF_{2\alpha}$) 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 ethanol, DMSO, and dimethyl formamide purged with an inert gas can be used. The solubility of 15(R)-15-methyl $PGF_{2\alpha}$ in these solvents is approximately 100 mg/ml. The solubility of 15(R)-15-methyl $PGF_{2\alpha}$ in 10 mM Na_2CO_3 is approximately 6.5 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(R)-15-methyl $PGF_{2\alpha}$ is needed, it can be prepared by evaporating the methyl acetate and directly dissolving the neat oil in aqueous buffers. The solubility of 15(R)-15-methyl $PGF_{2\alpha}$ in PBS (pH 7.2) is approximately 10 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

15(R)-15-methyl $PGF_{2\alpha}$ is a metabolically stable analog of $PGF_{2\alpha}$. 15(R)-15-methyl $PGF_{2\alpha}$ is an inactive, prodrug PGF agonist designed for activation by gastric acid after oral administration. Acid-catalyzed epimerization of 15(R)-15-methyl $PGF_{2\alpha}$ converts it into the active 15(S)-isomer.[1,2] The 15(S)-isomer induces luteolysis when injected in rhesus monkeys at a dose of about 12 mg/animal, while the 15(R)-isomer does not.[3]

References

1. Plaisted, S.M., DeZwaan, J., and Snider, B.G. High-performance liquid chromatographic determination of acid-catalyzed degradation products of methyl carboprost in a polymeric controlled-release device. *J. Chromatogr.* **314**, 369-377 (1984).
2. Hamberg, M., Zhang, L.Y., and Bergström, S. On the pH-dependent degradation of 15(*S*)-15 methyl-prostaglandin $F_{2\alpha}$ (Carboprost). *Eur. J. Pharm. Sci.* **3(1)**, 27-38 (1995).
3. Wilks, J.W. Inhibition of the monkey corpus luteum with 15-methyl prostaglandins. *Prostaglandins* **20(5)**, 793-805 (1980).

CAYMAN CHEMICAL
1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA
PHONE: [800] 364-9897
[734] 971-3335
FAX: [734] 971-3640
CUSTSERV@CAYMANCHEM.COM
WWW.**CAYMANCHEM**.COM