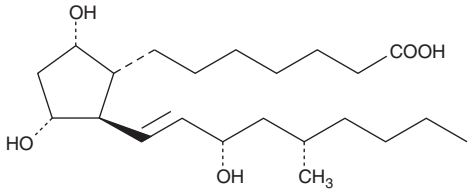
PRODUCT INFORMATION

17,20-dimethyl Prostaglandin $F_{1\alpha}$

Item No. 15790

Formal Name:	9α,11α,15S-trihydroxy-17S,20-dimethyl-prost-13E-en-1-oic acid
Synonym:	17,20-dimethyl $PGF_{1\alpha}$
MF:	$C_{22}H_{40}O_5$
FW:	384.6
Purity:	≥98%
Supplied as:	A crystalline solid
Storage:	-20°C
Stability:	≥4 years



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

Laboratory Procedures

17,20-dimethyl Prostaglandin $F_{1\alpha}$ (17,20-dimethyl $PGF_{1\alpha}$) is supplied as a crystalline solid. A stock solution may be made by dissolving the 17,20-dimethyl $PGF_{1\alpha}$ in the solvent of choice, which should be purged with an inert gas. 17,20-dimethyl $PGF_{1\alpha}$ is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of 17,20-dimethyl $PGF_{1\alpha}$ in these solvents is approximately 50, 130, and 30 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. Organic solvent-free aqueous solutions of 17,20-dimethyl $PGF_{1\alpha}$ can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of 17,20-dimethyl $PGF_{1\alpha}$ in PBS (pH 7.2) is approximately 2 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

17,20-dimethyl $PGF_{1\alpha}$ is an analog of the limaprost family with structural modifications intended to give it a prolonged half-life and greater potency. Limaprost is an analog of PGE_1 which is orally active in both rats and guinea pigs.[1] The additional methyl groups in the lower side chain confer a 10-1,000 fold increase in potency over the parent compound.[1] 17,20-dimethyl $PGF_{1\alpha}$ has lower side chain modifications identical to limaprost. There are no published reports describing the pharmacology of 17,20-dimethyl $PGF_{1\alpha}$.

Reference

1. Tsuboi, T., Hatano, N., Nakatsuji, K., *et al.* Pharmacological evaluation of OP 1206, a prostaglandin E_1 derivative, as an antianginal agent. *Arch. Int. Pharmacodyn. Ther.* **247(1)**, 89-102 (1980).

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