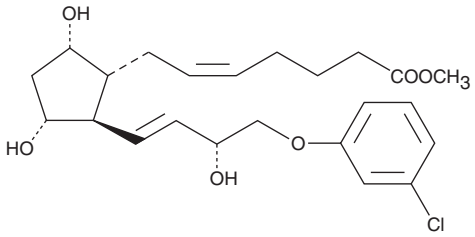
PRODUCT INFORMATION

(+)-Cloprostenol methyl ester

Item No. 10010115

CAS Registry No.:	56687-85-5
Formal Name:	(+)-9α,11α,15R-trihydroxy-16-(3-chlorophenoxy)-17,18,19,20-tetranor-prosta-5Z,13E-dien-1-oic acid, methyl ester
Synonyms:	D-Cloprostenol methyl ester, (+)-16-*m*-Chlorophenoxy tetranor PGF_{2a} methyl ester
MF:	$C_{23}H_{31}ClO_6$
FW:	438.9
Purity:	≥98%
UV/Vis.:	λ_{max}: 220, 275, 282 nm
Supplied as:	A solution in ethanol
Storage:	-20°C
Stability:	≥2 years



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

Laboratory Procedures

(+)-Cloprostenol methyl ester 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 (+)-cloprostenol methyl ester in these solvents is approximately 100 and 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 (+)-cloprostenol methyl ester is needed, it can be prepared by evaporating the ethanol and directly dissolving the neat oil in aqueous buffers. The solubility of (+)-cloprostenol methyl ester in PBS, pH 7.2, is approximately 10 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

(+)-Cloprostenol is a synthetic analog of prostaglandin F_{2a} (PGF_{2a}). It is an FP receptor agonist and a potent luteolytic agent in rats and hamsters. It is 200 times and 100 times more potent than PGF_{2a} in terminating pregnancy in hamsters and rats, respectively, without the side effects associated with PGF_{2a}.[1] Cloprostenol is also used in veterinary medicine as a luteolytic agent for the induction of estrus and the treatment of reproductive disorders in cattle, swine, and horses. (+)-Cloprostenol methyl ester is a more lipid soluble form of cloprostenol, which may be more amenable for certain formulations.

Reference

1. Dukes, M., Russell, W., and Walpole, A.L. Potent luteolytic agents related to prostaglandin F_{2a}. *Nature* **250**, 330-331 (1974).

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