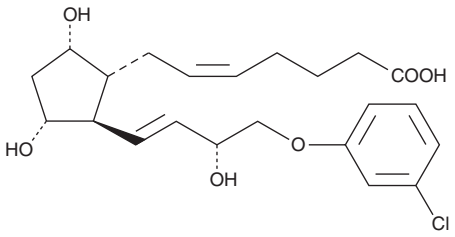
PRODUCT INFORMATION

(+)-Cloprostenol

Item No. 16765

CAS Registry No.: 54276-21-0
Formal Name: (+)-9α,11α,15R-trihydroxy-16-(3-chlorophenoxy)-17,18,19,20-tetranor-prosta-5Z,13E-dien-1-oic acid
Synonyms: D-Cloprostenol, (+)-16-*m*-chlorophenoxy tetranor $PGF_{2\alpha}$, (+)-16-*m*-chlorophenoxy tetranor Prostaglandin $F_{2\alpha}$
MF: $C_{22}H_{29}ClO_6$
FW: 424.9
Purity: ≥97%
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 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 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 (+)-cloprostenol is needed, it can be prepared by evaporating the ethanol and directly dissolving the neat oil in aqueous buffers. The solubility of (+)-cloprostenol in PBS (pH 7.2) is approximately 16 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

(+)-Cloprostenol is a synthetic analog of prostaglandin $F_{2\alpha}$ ($PGF_{2\alpha}$). It is an FP receptor agonist and a potent luteolytic agent in rats and hamsters. (+)-Cloprostenol is the optically active, 15(R) enantiomer of cloprostenol responsible for the majority of its biological activity. It is 200 times more potent than $PGF_{2\alpha}$ in terminating pregnancy when given subcutaneously at a daily dose of 0.125 µg/kg in rats and hamsters, without the side effects associated with $PGF_{2\alpha}$.[1] (+)-Cloprostenol was also shown to be a potent inhibitor of rat adipose precursor differentiation in primary cultures with an IC_{50} value of 3 pM.[2]

References

1. Dukes, M., Russell, W., and Walpole, A.L. Potent luteolytic agents related to prostaglandin $F_{2\alpha}$. *Nature* **250**, 330-331 (1974).
2. Serrero, G. and Lepak, N.M. Prostaglandin $F_{2\alpha}$ receptor (FP receptor) agonists are potent adipose differentiation inhibitors for primary culture of adipocyte precursors in defined medium. *Biochem. Biophys. Res. Commun.* **233**, 200-202 (1997).

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