

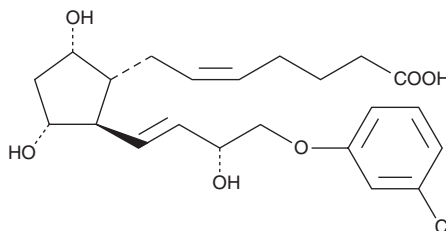
Product Information



(+)-Cloprostenol

Item No. 16765

CAS Registry No.: 54276-21-0
Formal Name: (+)-9 α ,11 α ,15R-trihydroxy-16-(3-chlorophenoxy)-17,18,19,20-tetranorprosta-5Z,13E-dien-1-oic acid
Synonyms: (+)-16-*m*-chlorophenoxy tetranor Prostaglandin F_{2 α}
MF: C₂₂H₂₉ClO₆
FW: 424.9
Purity: \geq 97%
Stability: \geq 2 years at -20°C
Supplied as: A solution in ethanol
UV/Vis.: λ_{max} : 220, 275, 282 nm



Laboratory Procedures

For long term storage, we suggest that (+)-cloprostenol be stored as supplied at -20°C. It should be stable for at least two years.

(+)-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.

(+)-Cloprostenol is a synthetic analog of prostaglandin F_{2 α} (PGF_{2 α}). 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 α} in terminating pregnancy when given subcutaneously at a daily dose of 0.125 μ g/kg in rats and hamsters, without the side effects associated with PGF_{2 α} .¹ (+)-Cloprostenol was also shown to be a potent inhibitor of rat adipose precursor differentiation in primary cultures with an IC₅₀ value of 3 x 10⁻¹² M.²

References

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

Related Products

Prostaglandin F_{2 α} - Item No. 16010 • (+)-Cloprostenol (sodium salt) - Item No. 16766 • Fluprostenol - Item No. 16768 • (+)-Cloprostenol isopropyl ester - Item No. 10010016 • (+)-Cloprostenol methyl ester - Item No. 10010115 • (+)-Cloprostenol methyl amide - Item No. 10010495

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WARNING: THIS PRODUCT IS FOR LABORATORY RESEARCH ONLY: NOT FOR ADMINISTRATION TO HUMANS. NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

MATERIAL SAFETY DATA

This material should be considered hazardous until information to the contrary becomes available. Do not ingest, swallow, or inhale. Do not get in eyes, on skin, or on clothing. Wash thoroughly after handling. This information contains some, but not all, of the information required for the safe and proper use of this material. Before use, the user must review the complete Material Safety Data Sheet, which has been sent via email to your institution.

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