

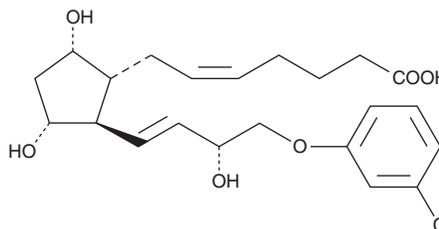
# PRODUCT INFORMATION



## (+)-Cloprostenol

Item No. 16765

**CAS Registry No.:** 54276-21-0  
**Formal Name:** (+)-9 $\alpha$ ,11 $\alpha$ ,15R-trihydroxy-16-(3-chlorophenoxy)-17,18,19,20-tetranorprosta-5Z,13E-dien-1-oic acid  
**Synonyms:** D-Cloprostenol, (+)-16-m-chlorophenoxy tetranor PGF<sub>2 $\alpha$</sub> , (+)-16-m-chlorophenoxy tetranor Prostaglandin F<sub>2 $\alpha$</sub>   
**MF:** C<sub>22</sub>H<sub>29</sub>ClO<sub>6</sub>  
**FW:** 424.9  
**Purity:**  $\geq$ 97%  
**UV/Vis.:**  $\lambda_{\text{max}}$ : 220, 275, 282 nm  
**Supplied as:** A solution in ethanol  
**Storage:** -20°C  
**Stability:**  $\geq$ 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<sub>2 $\alpha$</sub>  (PGF<sub>2 $\alpha$</sub> ). 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<sub>2 $\alpha$</sub>  in terminating pregnancy when given subcutaneously at a daily dose of 0.125  $\mu$ g/kg in rats and hamsters, without the side effects associated with PGF<sub>2 $\alpha$</sub> .<sup>1</sup> (+)-Cloprostenol was also shown to be a potent inhibitor of rat adipose precursor differentiation in primary cultures with an IC<sub>50</sub> value of 3 pM.<sup>2</sup>

### References

1. Dukes, M., Russell, W., and Walpole, A.L. Potent luteolytic agents related to prostaglandin F<sub>2 $\alpha$</sub> . *Nature* **250**, 330-331 (1974).
2. Serrero, G. and Lepak, N.M. Prostaglandin F<sub>2 $\alpha$</sub>  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).

#### WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

#### SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

#### WARRANTY AND LIMITATION OF REMEDY

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