

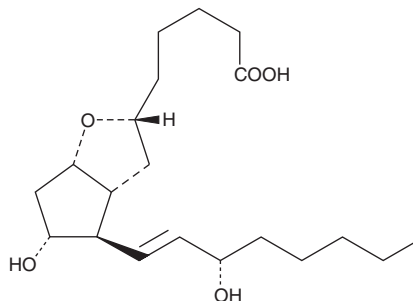
# PRODUCT INFORMATION



## 6 $\alpha$ -Prostaglandin I<sub>1</sub>

Item No. 18110

**CAS Registry No.:** 62777-90-6  
**Formal Name:** 6R,9 $\alpha$ -epoxy-11 $\alpha$ ,15S-dihydroxy-prost-13E-en-1-oic acid  
**Synonyms:** 6 $\alpha$ -PGI<sub>1</sub>, 5,6 $\alpha$ -dihydro PGI<sub>2</sub>  
**MF:** C<sub>20</sub>H<sub>34</sub>O<sub>5</sub>  
**FW:** 354.5  
**Purity:**  $\geq 99\%$   
**Supplied as:** A crystalline solid  
**Storage:** -20°C  
**Stability:**  $\geq 4$  years



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

### Laboratory Procedures

6 $\alpha$ -Prostaglandin I<sub>1</sub> (6 $\alpha$ -PGI<sub>1</sub>) is supplied as a crystalline solid. A stock solution may be made by dissolving the 6 $\alpha$ -PGI<sub>1</sub> in the solvent of choice, which should be purged with an inert gas. 6 $\alpha$ -PGI<sub>1</sub> is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of 6 $\alpha$ -PGI<sub>1</sub> in these solvents is approximately 20, 5, and 10 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 6 $\alpha$ -PGI<sub>1</sub> can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of 6 $\alpha$ -PGI<sub>1</sub> in PBS (pH 7.2) is approximately 0.08 mg/ml. We do not recommend storing the aqueous solution for more than one day.

### Description

6 $\alpha$ -PGI<sub>1</sub> is a stable Prostaglandin I<sub>2</sub> (PGI<sub>2</sub>) analog resistant to hydrolysis in aqueous solutions. 6 $\alpha$ -PGI<sub>1</sub> promotes cyclic AMP accumulation in human thyroid slices and cells in a concentration dependent manner. However, it is about 10-fold less potent than the  $\beta$ -isomer and 100-fold less potent than PGI<sub>2</sub> in eliciting the response.<sup>1</sup> 6 $\alpha$ -PGI<sub>1</sub> exhibits an IC<sub>50</sub> of 350 ng/ml for inhibition of ADP-induced platelet aggregation, which is nearly 900-fold higher than that observed for PGI<sub>2</sub> (0.4 ng/ml).<sup>2</sup>

### References

1. Patrono, C., Rotella, C.M., Toccafondi, R.S., *et al.* Prostacyclin stimulates the adenylate cyclase system of human thyroid tissue. *Prostaglandins* **22**(1), 105-115 (1981).
2. Whittle, B.J.R. and Moncada, S. Prostacyclin and its analogues for the therapy of thromboembolic disorders. *Adv. Exp. Med. Biol.* **164**, 193-209 (1984).

#### 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

Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

Copyright Cayman Chemical Company, 02/15/2024

#### 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](http://WWW.CAYMANCHEM.COM)