

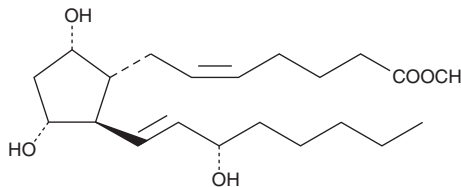
# PRODUCT INFORMATION



## Prostaglandin F<sub>2α</sub> methyl ester

Item No. 16011

**CAS Registry No.:** 33854-16-9  
**Formal Name:** 9α,11α,15S-trihydroxy-prosta-5Z,13E-dien-1-oic acid, methyl ester  
**Synonym:** PGF<sub>2α</sub> methyl ester  
**MF:** C<sub>21</sub>H<sub>36</sub>O<sub>5</sub>  
**FW:** 368.5  
**Purity:** ≥98%  
**Supplied as:** A solution in methyl acetate  
**Storage:** -20°C  
**Stability:** ≥2 years



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

### Laboratory Procedures

Prostaglandin F<sub>2α</sub> methyl ester (PGF<sub>2α</sub> methyl ester) is supplied as a solution in methyl acetate. To change the solvent, simply evaporate the methyl acetate under a gentle stream of nitrogen and immediately add the solvent of choice. Solvents such as ethanol, DMSO, and dimethyl formamide (DMF) purged with an inert gas can be used. The solubility of PGF<sub>2α</sub> methyl ester in ethanol is approximately 50 mg/ml and approximately 35 mg/ml in DMSO and DMF.

PGF<sub>2α</sub> methyl ester is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, the methyl acetate solution of PGF<sub>2α</sub> methyl ester should be diluted with the aqueous buffer of choice. PGF<sub>2α</sub> methyl ester has a solubility of 0.4 mg/ml in a 1:4 solution of ethanol:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

### Description

PGF<sub>2α</sub> methyl ester is an analog of PGF<sub>2α</sub> in which the C-1 carboxyl group has been esterified as the methyl ester. PGF<sub>2α</sub> methyl ester was one of the first PG esters shown to have ocular hypotensive activity.<sup>1</sup> This compound continues to be a standard by which other ocular hypotensive PG prodrugs are evaluated. The methyl ester is about 4-5 times more potent than the free acid, PGF<sub>2α</sub>. This difference is attributed to improved corneal penetration, and a depot effect of prolonged retention of the ester form of the compound in ocular tissue. A 2.5 μg dose of PGF<sub>2α</sub>-OMe applied to the eyes of cats results in a 6-8 mm Hg reduction in IOP.<sup>1</sup>

### Reference

1. Bito, L.Z. Comparison of the ocular hypotensive efficacy of eicosanoids and related compounds. *Exp. Eye Res.* **38(2)**, 181-184 (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, 03/14/2024

#### 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