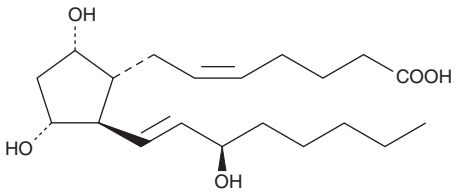
# PRODUCT INFORMATION

## 15(R)-Prostaglandin $F_{2\alpha}$

*Item No. 16740*

**CAS Registry No.:** 37658-84-7
**Formal Name:** 9α,11α,15R-trihydroxy-prosta-5Z,13E-dien-1-oic acid
**Synonyms:** 15-*epi* $PGF_{2\alpha}$, 15(R)-$PGF_{2\alpha}$
**MF:** $C_{20}H_{34}O_5$
**FW:** 354.5
**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

15(R)-Prostaglandin $F_{2\alpha}$ (15(R)-$PGF_{2\alpha}$) 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 purged with an inert gas can be used. The solubility of 15(R)-$PGF_{2\alpha}$ in these solvents is approximately 100 mg/ml.

15(R)-$PGF_{2\alpha}$ is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, the methyl acetate solution of 15(R)-$PGF_{2\alpha}$ should be diluted with the aqueous buffer of choice. The solubility of 15(R)-$PGF_{2\alpha}$ in PBS (pH 7.2) and 10 mM $Na_2CO_3$ is approximately 10 and 6.5 mg/ml, respectively. We do not recommend storing the aqueous solution for more than one day.

### Description

15(R)-$PGF_{2\alpha}$ is the C-15 epimer of the naturally occurring mammalian autacoid $PGF_{2\alpha}$. It has only 25% of the potency of $PGF_{2\alpha}$ in hamster antifertility studies, which may be due to reduced affinity for FP receptors.[1] Compared to $PGF_{2\alpha}$, 15(R)-$PGF_{2\alpha}$ has a binding affinity of 6.7% to ovine luteal cell receptors.[2] Similarly, the binding affinity to rat vascular smooth muscle cells is negligible as compared to $PGF_{2\alpha}$.[3]

### References


1. Miller, W.L. and Sutton, M.J. Relative biological activity of certain prostaglandins and their enantiomers. *Prostaglandins* **11(1)**, 77-84 (1976).
2. Balapure, A.K., Rexroad, C.E., Jr., Kawada, K., *et al.* Structural requirements for prostaglandin analog interaction with the ovine corpus luteum prostaglandin $F_{2\alpha}$ receptor. *Biochem. Pharmacol.* **38(14)**, 2375-2381 (1989).
3. Hanasaki, K., Kishi, M., and Arita, H. Phorbol ester-induced expression of the common, low-affinity binding site for primary prostanoids in vascular smooth muscle cells. *J. Biol. Chem.* **265(9)**, 4871-4875 (1990).



**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.

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**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