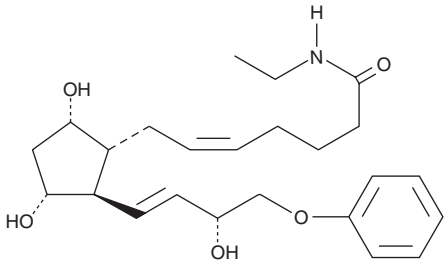
PRODUCT INFORMATION

16-phenoxy Prostaglandin $F_{2\alpha}$ ethyl amide

Item No. 10009875

CAS Registry No.:	951319-59-8
Formal Name:	N-ethyl-9α,11α,15S-trihydroxy-16-phenoxy-prosta-5Z,13E-dien-1-amide
Synonym:	16-phenoxy $PGF_{2\alpha}$ ethyl amide
MF:	$C_{24}H_{35}NO_5$
FW:	417.5
Purity:	≥98%
UV/Vis.:	λ_{max}: 220, 271 nm
Supplied as:	A crystalline solid
Storage:	-20°C
Stability:	≥4 years



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

Laboratory Procedures

16-phenoxy Prostaglandin $F_{2\alpha}$ ethyl amide (16-phenoxy $PGF_{2\alpha}$ ethyl amide) is supplied as a crystalline solid. A stock solution may be made by dissolving the 16-phenoxy $PGF_{2\alpha}$ ethyl amide in the solvent of choice, which should be purged with an inert gas. 16-phenoxy $PGF_{2\alpha}$ ethyl amide is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of 16-phenoxy $PGF_{2\alpha}$ ethyl amide in ethanol is approximately 25 mg/ml and approximately 50 mg/ml in DMSO and DMF.

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 16-phenoxy $PGF_{2\alpha}$ ethyl amide can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of 16-phenoxy $PGF_{2\alpha}$ ethyl amide in PBS (pH 7.2) is approximately 1 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

$PGF_{2\alpha}$, acting through the FP receptor, causes smooth muscle contraction and exhibits potent luteolytic activity.[1-3] 16-phenoxy $PGF_{2\alpha}$ is a metabolically stable analog of $PGF_{2\alpha}$. It binds to the FP receptor on ovine luteal cells with much greater affinity (440%) than $PGF_{2\alpha}$.[4] Ethyl amides of PGs serve as prodrugs, as they are hydrolyzed in certain tissues to generate the bioactive free acid.

References

1. Samuelsson, B., Goldyne, M., Granström, E., *et al*. Prostaglandins and thromboxanes. *Annu. Rev. Biochem.* **47**, 997-1029 (1978).
2. Speroff, L. and Ramwell, P.W. Prostaglandins in reproductive physiology. *Am. J. Obstet. Gynecol.* **107**, 1111-1130 (1970).
3. Crankshaw, D.J. and Gaspar, V. Pharmacological characterization *in vitro* of prostanoid receptors in the myometrium of nonpregnant ewes. *J. Reprod. Fertil.* **103**, 55-61 (1995).
4. 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**, 2375-2381 (1989).

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