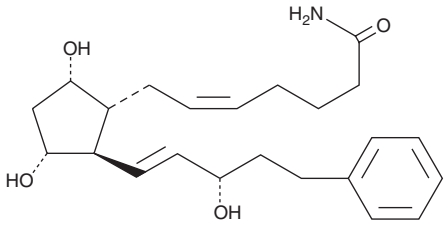
PRODUCT INFORMATION

17-phenyl trinor Prostaglandin $F_{2\alpha}$ amide

Item No. 16821

CAS Registry No.: 155205-89-3
Formal Name: (5Z)-7-[(1R,2R,3R,5S)-3,5-dihydroxy-2-[(1E,3S)-3-hydroxy-5-phenyl-1-penten-1-yl]cyclopentyl]-5-heptenamide
Synonyms: Bimatoprost amide, 17-phenyl trinor $PGF_{2\alpha}$ amide
MF: $C_{23}H_{33}NO_4$
FW: 387.5
Purity: ≥98%
Supplied as: A solution in ethanol
Storage: -20°C
Stability: ≥2 years



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

Laboratory Procedures

17-phenyl trinor Prostaglandin $F_{2\alpha}$ amide (17-phenyl trinor $PGF_{2\alpha}$ amide) 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 17-phenyl trinor $PGF_{2\alpha}$ amide in these solvents is approximately 20 and 30 mg/ml, respectively.

17-phenyl trinor $PGF_{2\alpha}$ amide is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, the ethanolic solution of 17-phenyl trinor $PGF_{2\alpha}$ amide should be diluted with the aqueous buffer of choice. The solubility of 17-phenyl trinor $PGF_{2\alpha}$ amide in PBS (pH 7.2) is approximately 2 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

17-phenyl trinor $PGF_{2\alpha}$ amide is an F-series PG analog in which the C-1 carboxyl group has been modified to an unsubstituted amide. PG esters have been shown to have ocular hypotensive activity.[1] PG N-ethyl amides were recently introduced as alternative PG hypotensive prodrugs.[2] Although it has been claimed that PG amides are not converted to the free acids *in vivo*, studies have shown that bovine and human corneal tissue converts the amides of various PGs to the free acids with a conversion efficiency of about 10-20% relative to the hydrolysis of isopropyl esters.[2,3] 17-phenyl trinor $PGF_{2\alpha}$ amide would be expected to show the typical intraocular effects of latanoprost, but with the much slower hydrolysis pharmacokinetics of the PG N-amides.

References

1. Bito, L.Z. Comparison of the ocular hypotensive efficacy of eicosanoids and related compounds. *Exp. Eye Res.* **38(2)**, 181-184 (1984).
2. Woodward, D.F., Krauss, A.H., Chen, J., *et al.* The pharmacology of bimatoprost (Lumigan™). *Surv. Ophthalmol.* **45(Suppl 4)**, S337-S345 (2001).
3. Maxey, K.M., Johnson, J., and LaBrecque, J. The hydrolysis of bimatoprost in corneal tissue generates a potent prostanoid FP receptor agonist. *Surv. Ophthalmol.* **47(Suppl 1)**, S34-S40 (2002).

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