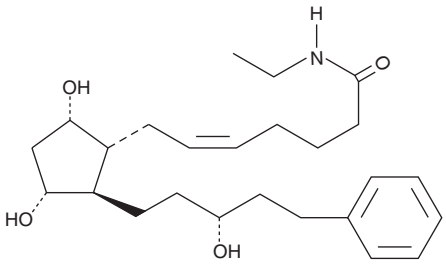
PRODUCT INFORMATION

Latanoprost ethyl amide

Item No. 16822

CAS Registry No.:	607351-44-0
Formal Name:	N-ethyl-9α,11α,15R-trihydroxy-17-phenyl-18,19,20-trinor-prost-5Z-en-1-amide
Synonym:	Lat-NEt
MF:	$C_{25}H_{39}NO_4$
FW:	417.6
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

Latanoprost ethyl amide (Lat-NEt) 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 Lat-NEt in ethanol and DMF is approximately 30 mg/ml and approximately 50 mg/ml in DMSO.

Lat-NEt is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, the methyl acetate solution of Lat-NEt should be diluted with the aqueous buffer of choice. The solubility of Lat-NEt in PBS (pH 7.2) is approximately 0.2 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

Lat-NEt is a latanoprost analog in which the C-1 carboxyl group has been modified to an N-ethyl amide. Prostaglandin esters have been shown to have ocular hypotensive activity.[1] Prostaglandin N-ethyl amides were recently introduced as alternative prostaglandin ocular hypotensive prodrugs.[2] Although it has been claimed that prostaglandin ethyl amides are not converted to the free acids *in vivo*, studies in our laboratories have shown that bovine and human corneal tissue converts the N-ethyl amides of various prostaglandins to the free acids with a conversion rate of about 2.5 µg/g corneal tissue/hr.[3,4] Lat-NEt would be expected to show the typical intraocular effects of Latanoprost free acid, but with the much slower hydrolysis pharmacokinetics of the prostaglandin 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. Larrouy, D., Vidal, H., Andreelli, F., *et al.* Cloning and mRNA tissue distribution of human PPARγ coactivator-1. *Int. J. Obes. Relat. Metab. Disord.* **23(12)**, 1327-1332 (1999).
4. 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).

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