PRODUCT INFORMATION



8-iso Prostaglandin $F_{2\alpha}$ Ethanolamide

Item No. 10005764

Formal Name:	N-(2-hydroxyethyl)-9α,11α,15S- trihydroxy-(8β)-prosta-5Z,13E- dien-1-amide
Synonyms:	iPF _{2α} -III Ethanolamide, 8-Isoprostane Ethanolamide, 8- <i>iso</i> PGF _{2α} Ethanolamide, 8- <i>epi</i> PGF _{2α} Ethanolamide
MF:	C ₂₂ H ₃₉ NO ₅ ^m
FW:	397.5 HO
Purity:	≥98% OH
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

8-iso Prostaglandin $F_{2\alpha}$ ethanolamide (8-iso $PGF_{2\alpha}$ ethanolamide) 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 8-iso PGF_{2a} ethanolamide in these solvents is approximately 20 mg/ml.

8-iso PGF_{2a} ethanolamide is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, the ethanolic solution of 8-iso PGF_{2a} ethanolamide should be diluted with the aqueous buffer of choice. 8-iso PGF₂₀ ethanolamide has a solubility of 0.1 mg/ml in a 1:8 solution of ethanol:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

It has been reported that anandamide (AEA) can be used directly by cyclooxygenase-2 and specific prostaglandin H_2 (PGH₂) isomerases to produce ethanolamide congeners of the classical PGs, including $PGF_{2\alpha}$.¹ $PGF_{2\alpha}$ ethanolamide has also been reported to be biosynthesized by this mechanism when AEA was infused into the lung and liver of fatty acid amide hydrolase-deficient mice.² However, the accumulation of AEA can also lead to isoprostane-type peroxidative decomposition. 8-iso PGF_{2a} ethanolamide is a standard that allows one to distinguish these non-enzymatic decomposition products from "prostamides" that could be of enzymatic origin.

References

- 1. Bachur, N.R., Masek, K., Melmon, K.L., et al. Fatty acid amides of ethanolamine in mammalian tissues. J. Biol. Chem. 240, 1019-1024 (1965).
- 2. Weber, A., Ni, J., Ling, K.H.J., et al. Formation of prostamides from anandamide in FAAH knockout mice analyzed by HPLC with tandem mass spectrometry. J. Lipid. Res. 45(4), 757-763 (2004).

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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