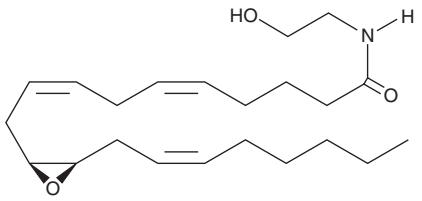
PRODUCT INFORMATION

(±)11(12)-EET Ethanolamide

Item No. 10008598

Formal Name:	N-(2-hydroxyethyl)-(±)11(12)-epoxy-5Z,8Z,14Z-eicosatrienamide
Synonym:	(±)11,12-EpETrE Ethanolamide
MF:	$C_{22}H_{37}NO_3$
FW:	363.5
Purity:	≥98%
Supplied as:	A solution in ethanol
Storage:	-80°C
Stability:	≥2 years



NOTE: Relative stereochemistry shown in chemical structure

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

Laboratory Procedures

(±)11(12)-EET 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 (±)11(12)-EET ethanolamide in these solvents is approximately 20 and 30 mg/ml, respectively.

(±)11(12)-EET ethanolamide is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, the ethanolic solution of (±)11(12)-EET ethanolamide should be diluted with the aqueous buffer of choice. (±)11(12)-EET ethanolamide has a solubility of approximately 0.5 mg/ml in a 1:1 solution of ethanol:PBS (pH 7.2) using this method.

Description

Arachidonoyl ethanolamide (AEA; anandamide) is an endogenous lipid neurotransmitter with cannibingeric activity, binding to both the central cannabinoid (CB_1) and periphenal (CB_2) receptors.[1,2] Fatty acid amide hydrolase (FAAH) is the enzyme responsible for the hydrolysis and inactivation of AEA.[3] Metabolism of AEA by cyclooxygenase-2, leading to formation of prostaglandin ethanolamides, and by lipoxygenases has also been documented.[4] (±)11(12)-EET ethanolamide is a potential cytochrome P450 (CYP450) metabolite of AEA, although specific stereochemistry rather than a racemic mixture would likely ensue from enzymatic metabolism. CYP450 metabolism of AEA may be particularly relevant under conditions of FAAH inhibition. Evidence for the formation of (±)11(12)-EET ethanolamide *in vivo* has not been documented.

References

1. Felder, C.C., Briley, E.M., Axelrod, J., *et al.* Anandamide, an endogenous cannabimimetic eicosanoid, binds to the cloned human cannabinoid receptor and stimulates receptor-mediated signal transduction. *Proc. Natl. Acad. Sci. USA* **90**, 7656-7660 (1993).
2. Lambert, D.M. and Fowler, C.J. The endocannabinoid system: Drug targets, lead compounds, and potential therapeutic applications. *J. Med. Chem.* **48(16)**, 5059-5087 (2005).
3. Deutsch, D.G., Ueda, N., and Yamamoto, S. The fatty acid amide hydrolase (FAAH). *Prostaglandins Leukot. Essent. Fatty Acids* **66(2&3)**, 201-210 (2002).
4. Kozak, K.R. and Marnett, L.J. Oxidative metabolism of endocannabinoids. *Prostaglandins Leukot. Essent. Fatty Acids* **66(2&3)**, 211-220 (2002).

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