

PRODUCT INFORMATION



(±)14(15)-EET Ethanolamide

Item No. 10008599

Formal Name: N-(2-hydroxyethyl)-(±)14(15)-epoxy-5Z,8Z,11Z-eicosatrienamide

Synonyms: (±)14,15-EpETrE Ethanolamide,
(±)14(15)-Epoxy Eicosatrienoyl
Ethanolamide

MF: C₂₂H₃₇NO₃

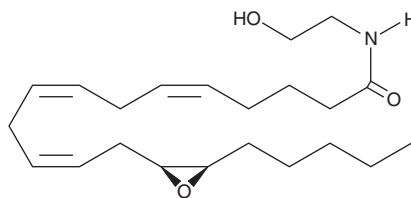
FW: 363.5

Purity: ≥95%

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

(±)14(15)-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 (±)14(15)-EET ethanolamide in these solvents is approximately 20 and 30 mg/ml, respectively.

(±)14(15)-EET ethanolamide is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, the ethanolic solution of (±)14(15)-EET ethanolamide should be diluted with the aqueous buffer of choice. (±)14(15)-EET ethanolamide has a solubility of approximately 0.5 mg/ml in a 1:6 solution of ethanol:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

Arachidonyl ethanolamide (AEA) is an endogenous lipid neurotransmitter with cannabinergic activity, binding to both the central cannabinoid (CB₁) and peripheral cannabinoid (CB₂) 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 (±)14(15)-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 (±)14(15)-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).

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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