

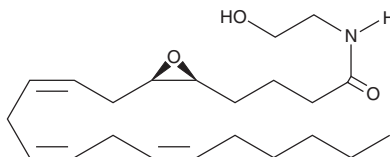
# PRODUCT INFORMATION



## (±)5(6)-EET Ethanolamide

Item No. 10008596

<b>Formal Name:</b>	N-(2-hydroxyethyl)-(±)5,6-epoxy-8Z,11Z,14Z-eicosatrienamide
<b>Synonym:</b>	(±)5,6-EpETrE Ethanolamide
<b>MF:</b>	C <sub>22</sub> H <sub>37</sub> NO <sub>3</sub>
<b>FW:</b>	363.5
<b>Purity:</b>	≥95%
<b>Supplied as:</b>	A solution in ethanol
<b>Storage:</b>	-80°C
<b>Stability:</b>	≥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

(±)5(6)-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 (±)5(6)-EET ethanolamide in these solvents is approximately 20 mg/ml.

(±)5(6)-EET ethanolamide is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, the ethanolic solution of (±)5(6)-EET ethanolamide should be diluted with the aqueous buffer of choice. (±)5(6)-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; Item No. 90050) is an endogenous lipid neurotransmitter with cannabinergic activity, binding to both the central cannabinoid (CB<sub>1</sub>) and peripheral cannabinoid (CB<sub>2</sub>) receptors.<sup>1,2</sup> Fatty acid amide hydrolase (FAAH) is the enzyme responsible for the hydrolysis and inactivation of AEA.<sup>3</sup> Metabolism of AEA by cyclooxygenase-2, leading to formation of prostaglandin ethanolamides, and by lipoxygenases has also been documented.<sup>4</sup> (±)5(6)-EET ethanolamide is a cytochrome P450 (CYP450) metabolite of AEA, although specific stereochemistry rather than a racemic mixture ensues from enzymatic metabolism. (±)5(6)-EET ethanolamide is a potent and selective agonist of CB<sub>2</sub> (K<sub>i</sub> = 8.9 nM for CB<sub>2</sub>, 1.4 μM for CB<sub>1</sub>), effectively suppressing forskolin-stimulated accumulation of cAMP through this G<sub>i</sub>-coupled receptor (IC<sub>50</sub> = 9.8 nM).<sup>5</sup>

### References

1. Felder, C.C., Briley, E.M., Axelrod, J., et al. *Proc. Natl. Acad. Sci. USA* **90**, 7656-7660 (1993).
2. Lambert, D.M. and Fowler, C.J. *J. Med. Chem.* **48(16)**, 5059-5087 (2005).
3. Deutsch, D.G., Ueda, N., and Yamamoto, S. *Prostaglandins Leukot. Essent. Fatty Acids* **66(2&3)**, 201-210 (2002).
4. Kozak, K.R. and Marnett, L.J. *Prostaglandins Leukot. Essent. Fatty Acids* **66(2&3)**, 211-220 (2002).
5. Snider, N.T., Nast, J.A., Tesmer, L.A., et al. *Mol. Pharmacol.* **75(4)**, 965-972 (2009).

#### 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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