PRODUCT INFORMATION



15(S)-HETE Ethanolamide

Item No. 10169

CAS Registry No.:	161744-53-2	
Formal Name:	15(S)-hydroxy-N-(2-hydroxyethyl)-	
Synonyms:	5Z,8Z,11Z,13E-eicosatetraenamide 15(S)-HAEA, 15(S)-Hydroxyeicosatetraenoic Acid Ethanolamide	HONNH
MF:	C ₂₂ H ₃₇ NO ₃	
FW:	363.5	$\langle \langle \rangle$
Purity:	≥98%	
UV/Vis.:	λ _{max} : 236 nm	ЮН
Supplied as:	A solution in ethanol	0
Storage:	-20°C	
Stability:	≥2 years	
Information represents the product specifications. Batch specific analytical results are provided on each cortificate of analysis		

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Laboratory Procedures

15(S)-HETE 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 15(S)-HETE ethanolamide in these solvents is approximately 10 mg/ml.

15(S)-HETE ethanolamide is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, the ethanolic solution of 15(S)-HETE ethanolamide should be diluted with the aqueous buffer of choice. 15(S)-HETE ethanolamide has a solubility of approximately 5 mg/ml in a 1:2 solution of ethanol:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

Arachidonoyl ethanolamide (AEA; Item No. 90050) was the first endogenous cannabinoid (CB) to be isolated and characterized as an agonist acting on the same receptors (CB₁ and CB₂) as THC.^{1,2} Since that time, a number of related endocannabinoids have been isolated, most notably 2-arachidonoyl glycerol (Item No. 62160).²

Lipoxygenases, especially rabbit reticulocyte and soybean 15-lipoxygenases, actively convert endocannabinoids to their 15(S)-hydroperoxy and hydroxy metabolites.³ 15(S)-HETE ethanolamide is less potent than AEA at the CB₁ receptor (K; of 600 versus 90 nM). 15(S)-HETE ethanolamide also inhibits fatty acid amide hydrolase.4

References

- 1. Devane, W.A., Hanus, L., Breuer, A., et al. Isolation and structure of a brain constituent that binds to the cannabinoid receptor. Science 258, 1946-1949 (1992).
- 2. 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).
- 3. Ueda, N., Yamamoto, K., Kurahashi, Y., et al. Oxygenation of arachidonylethanolamide (anandamide) by lipoxygenases. Adv. Prostaglandin Thromboxane Leukot. Res. 23, 163-165 (1995).
- 4. van der Stelt, M., van Kuik, A., Bari, M., et al. Oxygenated metabolites of anandamide and 2-arachidonoylgycerol: Conformational analysis and interaction with cannabinoid receptors, membrane transporter, and fatty acid amide hydrolase. J. Med. Chem. 45, 3709-3720 (2002).

WARNING THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFFTY 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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