PRODUCT INFORMATION



Arachidonoyl Ethanolamide

Item No. 90050

CAS Registry No.:	94421-68-8	
Formal Name:	N-(2-hydroxyethyl)-5Z,8Z,11Z,14Z-	110
	eicosatetraenamide	HONH
Synonyms:	AEA, Anandamide	
MF:	$C_{22}H_{37}NO_{2}$	
FW:	347.5	
Purity:	≥98%	$\langle - \land - \land \land \land \rangle$
Supplied as:	A solution in ethanol	
Storage:	-20°C	
Stability:	≥4 year	
Special Conditions: Oxygen and light sensitive		

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

Laboratory Procedures

Arachidonoyl ethanolamide (AEA) 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 or dimethyl formamide purged with an inert gas can be used. The solubility of AEA in these solvents is approximately 30 and 10 mg/ml, respectively.

AEA is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, the ethanolic solution of AEA should be diluted with the aqueous buffer of choice. AEA is slightly soluble in PBS (pH 7.2). We do not recommend storing the aqueous solution for more than one day. AEA is a lipid soluble compound and therefore is not directly soluble in aqueous solutions. In cell culture studies, AEA is directly added as an ethanolic solution to the medium.¹ Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations.

Description

Arachidonoyl ethanolamide (AEA) is the ethanolamine amide of arachidonic acid, originally isolated from porcine brain.¹ AEA is an endogenous cannabinoid neurotransmitter that binds to both cannabinoid 1 (CB_1) and CB_2 receptors.² AEA has K_i values ranging from 61 to 543 nM for CB_1 receptors and from 279 to 1,940 nM for CB₂ receptors.³

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(5090), 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(16), 7656-7660 (1993).
- 3. Pertwee, R.G. Pharmacology of cannabinoid receptor ligands. Curr. Med. Chem. 6(8), 635-664 (1999).

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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