

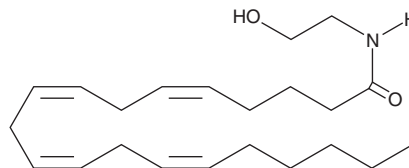
PRODUCT INFORMATION



Arachidonoyl Ethanolamide

Item No. 90050

CAS Registry No.: 94421-68-8
Formal Name: N-(2-hydroxyethyl)-5Z,8Z,11Z,14Z-eicosatetraenamide
Synonyms: AEA, Anandamide
MF: C₂₂H₃₇NO₂
FW: 347.5
Purity: ≥98%
Supplied as: A solution in ethanol
Storage: -20°C
Stability: ≥1 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.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. If an organic solvent-free solution of AEA is needed, it can be prepared by evaporating the AEA and directly dissolving the neat oil in aqueous buffers. The solubility of AEA in PBS, pH 7.2, is approximately 100 µg/ml. 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 (CB₁) and CB₂ receptors.² AEA has K_i values ranging from 61 to 543 nM for CB₁ 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**, 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. 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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