

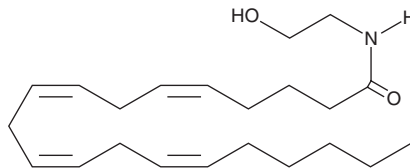
# Product Information



## Arachidonoyl Ethanolamide

Item No. 90050

**CAS Registry No.:** 94421-68-8  
**Formal Name:** N-(2-hydroxyethyl)-5Z,8Z,11Z,14Z-eicosatetraenamide  
**Synonyms:** Anandamide; AEA  
**MF:** C<sub>22</sub>H<sub>37</sub>NO<sub>2</sub>  
**FW:** 347.5  
**Purity:** ≥98%  
**Stability:** ≥1 year at -20°C  
**Supplied as:** A solution in ethanol  
**Misc:** Oxygen and light sensitive



### Laboratory Procedures

For long term storage, we suggest that arachidonoyl ethanolamide (AEA) be stored as supplied at -20°C. It should be stable for at least one year.

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.<sup>1</sup> Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations.

AEA is the ethanolamine amide of arachidonic acid, first isolated from porcine brain.<sup>1</sup> AEA is an endogenous cannabinoid neurotransmitter that binds to both central cannabinoid (CB<sub>1</sub>) and peripheral cannabinoid (CB<sub>2</sub>) receptors.<sup>2</sup> AEA inhibits the specific binding of [<sup>3</sup>H]-HU-243 to synaptosomal membranes with a K<sub>i</sub> value of 52 nM, compared to 46 nM for Δ<sup>9</sup>-THC.<sup>1</sup>

### References

- 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).
- 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).

### Related Products

N-Arachidonoyl-3-hydroxy-γ-Aminobutyric Acid - Item No. 10158 • Arachidonoyl Ethanolamide Phosphate - Item No. 10180 • (±)-CP47,497-C8-homolog-d<sub>7</sub> - Item No. 10686 • Eicosapentaenoyl Ethanolamide - Item No. 10964 • Palmitoleoyl Ethanolamide - Item No. 10965 • Leukotriene B<sub>4</sub> Ethanolamide - Item No. 20112 • CAY10412 - Item No. 72620 • Arachidonoyl-2'-Fluoroethylamide - Item No. 90054 • N-Arachidonoyl Dopamine - Item No. 90057 • Cannabidiol (solution) - Item No. 90081 • CP 55,940 - Item No. 90084 • Arachidonoyl Cyclopropylamide - Item No. 91053 • Arachidonoyl 2'-Chloroethylamide - Item No. 91054 • Monoacylglycerol Lipase Polyclonal Antibody - Item No. 100035 • CB<sub>2</sub> Receptor Polyclonal Antibody - Item No. 101550 • Arachidonoyl Ethanolamide-d<sub>8</sub> - Item No. 390050 • Oleoyl Serotonin - Item No. 9000629 • Oleoyl Serotonin-d<sub>7</sub> - Item No. 9000694 • AMC Arachidonoyl Amide - Item No. 10005098 • AM1172 - Item No. 10005223 • Arachidoyl Ethanolamide - Item No. 10005765 • Docosanoyl Ethanolamide - Item No. 10005823 • Arachidonoyl Ethanolamide Lipid Maps MS Standard - Item No. 10007270 • Arachidonoyl-N,N-dimethyl amide - Item No. 10007293 • (±)5(6)-EET Ethanolamide - Item No. 10008596 • (±)8(9)-EET Ethanolamide - Item No. 10008597 • 20-HETE Ethanolamide - Item No. 10008602 • oxy-Arachidonoyl Ethanolamide - Item No. 10008642 • 1-Linoleoyl Glycerol - Item No. 10008869 • O-Arachidonoyl Glycidol - Item No. 10010547 • PF-622 - Item No. 10010907 • PF-750 - Item No. 10010908

**WARNING: THIS PRODUCT IS FOR LABORATORY RESEARCH ONLY; NOT FOR ADMINISTRATION TO HUMANS. NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.**

### MATERIAL SAFETY DATA

This material should be considered hazardous until information to the contrary becomes available. Do not ingest, swallow, or inhale. Do not get in eyes, on skin, or on clothing. Wash thoroughly after handling. This information contains some, but not all, of the information required for the safe and proper use of this material. Before use, the user must review the complete Material Safety Data Sheet, which has been sent via email to your institution.

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### Cayman Chemical

**Mailing address**  
1180 E. Ellsworth Road  
Ann Arbor, MI  
48108 USA

**Phone**  
(800) 364-9897  
(734) 971-3335

**Fax**  
(734) 971-3640

**E-Mail**  
custserv@caymanchem.com

**Web**  
www.caymanchem.com