

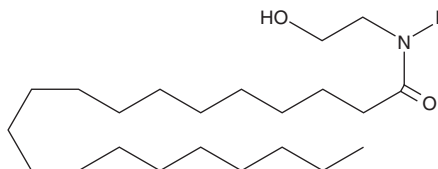
# Product Information



## Arachidoyl Ethanolamide

Catalog No. 10005765

**CAS Registry No.:** 94421-69-9  
**Formal Name:** N-(2-hydroxyethyl)-eicosanamide  
**Synonym:** N-Arachidoylethanolamine  
**MF:** C<sub>22</sub>H<sub>45</sub>NO<sub>2</sub>  
**FW:** 355.6  
**Purity:** ≥98%  
**Stability:** ≥2 years at -20°C  
**Supplied as:** A crystalline solid



### Laboratory Procedures

For long term storage, we suggest that arachidoyl ethanolamide be stored as supplied at -20°C. It should be stable for at least two years.

Arachidoyl ethanolamide is supplied as a crystalline solid. A stock solution may be made by dissolving the arachidoyl ethanolamide in an organic solvent purged with an inert gas. Arachidoyl ethanolamide is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of arachidoyl ethanolamide in these solvents is approximately 30, 20, 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. Organic solvent-free aqueous solutions of arachidoyl ethanolamide can be prepared by directly dissolving the crystalline compound in aqueous buffers. The solubility of arachidoyl ethanolamide in PBS (pH 7.2) is approximately 0.15 mg/ml. We do not recommend storing the aqueous solution for more than one day.

The endocannabinoids<sup>1,2</sup> present a rich system of central cannabinoid (CB<sub>1</sub>), peripheral cannabinoid (CB<sub>2</sub>), and non-CB receptor-mediated pharmacology that has stimulated research in many fields including memory, weight loss and appetite, neurodegeneration, tumor surveillance, analgesia, and inflammation. Arachidoyl ethanolamide is one of the saturated fatty acyl ethanolamides devoid of classical (CB<sub>1</sub>/CB<sub>2</sub>) activity. Arachidoyl ethanolamide does not bind to the murine CB<sub>1</sub> receptor<sup>3</sup> and does not compete with anandamide as a substrate for the endocannabinoid hydrolytic enzyme fatty acid amide hydrolase.<sup>4</sup> Non-CB receptor-mediated pharmacology of the saturated ethanolamides is still being elucidated.<sup>5</sup>

### References

1. Martin, B.R., Mechoulam, R., and Razdan, R.K. Discovery and characterization of endogenous cannabinoids. *Life Sci.* **65**, 573-595 (1999).
2. Pertwee, R.G. Pharmacology of cannabinoid receptor ligands. *Current Medicinal Chemistry* **6**, 635-664 (1999).
3. Sheskin, T., Hanus, L., Slager, J., *et al.* Structural requirements for binding of anandamide-type compounds to the brain cannabinoid receptor. *J. Med. Chem.* **40**, 659-667 (1997).
4. Desarnaud, F., Cadas, H., and Piomelli, D. Anandamide amidohydrolase activity in rat brain microsomes. Identification and partial characterization. *J. Biol. Chem.* **270**(11), 6030-6035 (1995).
5. Smart, D., Jonsson, K.-O., Vandevoorde, S., *et al.* 'Entourage' effects of N-acyl ethanolamines at human vanilloid receptors. Comparison of effects upon anandamide-induced vanilloid receptor activation and upon anandamide metabolism. *Br. J. Pharmacol.* **136**, 452-458 (2002).

### Related Products

Arachidonoyl *p*-Nitroaniline - Cat. No. 10168 • Arachidonoyl Ethanolamide Phosphate - Cat. No. 10180 • Arachidonoyl Ethanolamide - Cat. No. 90050

**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.

#### WARRANTY AND LIMITATION OF REMEDY

Cayman Chemical Company makes **no warranty or guarantee** of any kind, whether written or oral, expressed or implied, including without limitation, any warranty of fitness for a particular purpose, suitability and merchantability, which extends beyond the description of the chemicals hereof. Cayman **warrants only** to the original customer that the material will **meet our specifications at the time of delivery**.

Cayman will carry out its delivery obligations with due care and skill. Thus, in no event will Cayman have **any obligation or liability**, whether in tort (including negligence) or in contract, for any direct, indirect, incidental or consequential damages, even if Cayman is informed about their possible existence.

This limitation of liability does not apply in the case of intentional acts or negligence of Cayman, its directors or its employees. Buyer's **exclusive remedy** and Cayman's sole liability hereunder shall be limited to a **refund** of the purchase price, or at Cayman's option, the **replacement**, at no cost to Buyer, of all material that does not meet our specifications.

Said refund or replacement is conditioned on Buyer giving written notice to Cayman within thirty (30) days after arrival of the material at its destination. Failure of Buyer to give said notice within thirty (30) days shall constitute a waiver by Buyer of all claims hereunder with respect to said material.

For further details, please refer to our **Warranty and Limitation of Remedy located on our website and in our catalog**.

Copyright Cayman Chemical Company, 02/09/2010

### 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