

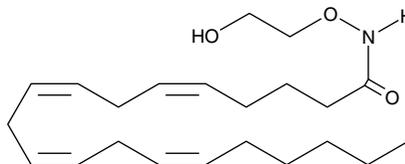
# Product Information



## oxy-Arachidonoyl Ethanolamide

Item No. 10008642

**CAS Registry No.:** 883296-70-6  
**Formal Name:** N-(2-hydroxyethoxy)-5Z,8Z,11Z,14Z-eicosatetraenamide  
**Synonyms:** oxy-AEA, oxy-Anandamide  
**MF:** C<sub>22</sub>H<sub>37</sub>NO<sub>3</sub>  
**FW:** 363.5  
**Purity:** ≥98%  
**Stability:** ≥1 year at -20°C  
**Supplied as:** A solution in ethanol



### Laboratory Procedures

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

oxy-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 and dimethyl formamide (DMF) purged with an inert gas can be used. The solubility of oxy-AEA in these solvents is approximately 30 mg/ml in DMSO and approximately 20 mg/ml in DMF.

If aqueous stock solutions are required for biological experiments, they can best be prepared by diluting the organic solvent into aqueous buffers or isotonic saline. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. We do not recommend storing the aqueous solution for more than one day.

AEA acts as an endogenous mimic of  $\Delta^9$ -THC, the psychotropic component of marijuana.<sup>1</sup> oxy-AEA is the O-alkyl-N-acyl oxyhomologue of AEA. oxy-AEA binds selectively to the peripheral cannabinoid (CB<sub>2</sub>) receptor with K<sub>i</sub> values of 0.47 and 0.081  $\mu$ M for hCB<sub>1</sub> and hCB<sub>2</sub>, respectively.<sup>2</sup> In comparison, anandamide has a greater affinity for the central cannabinoid (CB<sub>1</sub>) receptor with K<sub>i</sub> values of 0.07 and 0.18  $\mu$ M for hCB<sub>1</sub> and hCB<sub>2</sub>, respectively. oxy-AEA is the first known fatty acid amide with a reversed CB<sub>1</sub>/CB<sub>2</sub> affinity ratio.

### 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).
- Appendino, G., Minassi, A., Berton, L., *et al.* Oxyhomologues of anandamide and related endolipids: Chemoselective synthesis and biological activity. *J. Med. Chem.* **49**, 2333-2338 (2006).

### Related Products

For a list of related products please visit: [www.caymanchem.com/catalog/10008642](http://www.caymanchem.com/catalog/10008642)

**WARNING: THIS PRODUCT IS NOT INTENDED OR APPROVED FOR HUMAN OR VETERINARY USE. USE OF THIS PRODUCT FOR HUMAN OR ANIMAL TESTING IS EXTREMELY HAZARDOUS AND MAY RESULT IN DISEASE, SEVERE INJURY, OR DEATH.**

#### 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 under separate cover to the MSDS supervisor at 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, 11/29/2012

### 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](mailto:custserv@caymanchem.com)

#### Web

[www.caymanchem.com](http://www.caymanchem.com)