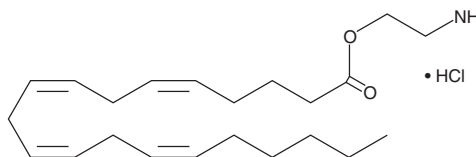


PRODUCT INFORMATION

O-Arachidonoyl Ethanolamine (hydrochloride)

Item No. 91050

CAS Registry No.: 443129-35-9
Formal Name: 5Z,8Z,11Z,14Z-eicosatetraenoic acid, 2-aminoethyl ester, monohydrochloride
Synonyms: Arachidonic Acid-(2-aminoethyl)-ester, O-AEA, Virodhamine
MF: $C_{22}H_{37}NO_2 \cdot HCl$
FW: 384.0
Purity: $\geq 98\%$
Supplied as: A neat oil
Storage: $-80^{\circ}C$
Stability: ≥ 6 months



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

Laboratory Procedures

O-Arachidonoyl ethanolamine (O-AEA) (hydrochloride) is supplied as a neat oil. A stock solution may be made by dissolving the O-AEA (hydrochloride) in the solvent of choice. O-AEA (hydrochloride) is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide, which should be purged with an inert gas. The solubility of O-AEA (hydrochloride) in these solvents is approximately 20 mg/ml. O-AEA (hydrochloride) is not stable in solution, dilute samples and use immediately.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Organic solvent-free aqueous solutions of O-AEA (hydrochloride) can be prepared by directly dissolving the neat oil in aqueous buffers. The solubility of O-AEA (hydrochloride) in PBS (pH 7.2) is approximately 100 μ g/ml. We do not recommend storing the aqueous solution for more than one day.

Description

Arachidonoyl ethanolamide (AEA) was the first endogenous cannabinoid to be isolated and characterized as an agonist acting on the same receptors (CB_1 and CB_2) as tetrahydrocannabinols (THC).^{1,2} Since that time, a number of related endocannabinoids have been isolated, most notably 2-arachidonoyl glycerol (2-AG).³ O-AEA is a recently isolated constituent of human and rat brain wherein the ethanolamine moiety is attached "backwards", as an ester instead of an amide, as in AEA.^{1,2,4} O-AEA has mixed agonist/antagonist activity at the CB_1 receptor and does not appear to be the native endogenous cannabinoid agonist at this receptor. This is in keeping with other observations that 2-AG is the primary endogenous CB_1 receptor ligand.⁵

References

1. Devane, W.A., Hanus, L., Breuer, A., et al. *Science* **258**(5090), 1946-1949 (1992).
2. Felder, C.C., Briley, E.M., Axelrod, J., et al. *Proc. Natl. Acad. Sci. USA* **90**(16), 7656-7660 (1993).
3. Sugiura, T., Kodaka, T., Kondo, S., et al. *J. Biochem.* **122**(4), 890-895 (1997).
4. Porter, A.C., Sauer, J.-M., Knierman, M.D., et al. *J. Phar. Exp. Ther.* **301**(3), 1020-1024 (2002).
5. Sugiura, T., Kodaka, T., Nakane, S., et al. *J. Biol. Chem.* **274**(5), 2794-2801 (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.

WARRANTY AND LIMITATION OF REMEDY

Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

Copyright Cayman Chemical Company, 02/16/2023

CAYMAN CHEMICAL

1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA

PHONE: [800] 364-9897
[734] 971-3335

FAX: [734] 971-3640

CUSTSERV@CAYMANCHEM.COM
WWW.CAYMANCHEM.COM