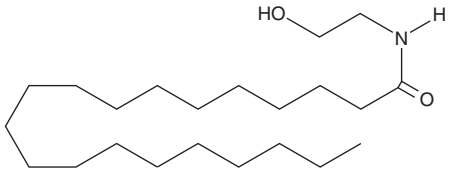
PRODUCT INFORMATION

Arachidoyl Ethanolamide

Item No. 10005765

CAS Registry No.:	94421-69-9
Formal Name:	N-(2-hydroxyethyl)-eicosanamide
Synonym:	N-Arachidoylethanolamine
MF:	$C_{22}H_{45}NO_2$
FW:	355.6
Purity:	≥98%
Supplied as:	A crystalline solid
Storage:	-20°C
Stability:	≥4 years



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

Laboratory Procedures

Arachidoyl ethanolamide is supplied as a crystalline solid. A stock solution may be made by dissolving the arachidoyl ethanolamide in the solvent of choice, which should be 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 2.5, 10, and 20 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 solid in aqueous buffers. The solubility of arachidoyl ethanolamide in PBS (pH 7.2) is approximately .15 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

The endocannabinoids present a rich system of central cannabinoid (CB_1), peripheral cannabinoid (CB_2), 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.[1,2] Arachidoyl ethanolamide is one of the saturated fatty acyl ethanolamides devoid of classical (CB_1/CB_2) activity. Arachidoyl ethanolamide does not bind to the murine CB_1 receptor and does not compete with anandamide as a substrate for the endocannabinoid hydrolytic enzyme fatty acid amide hydrolase.[3,4] Non-CB receptor-mediated pharmacology of the saturated ethanolamides is still being elucidated.[5]

References

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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).

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