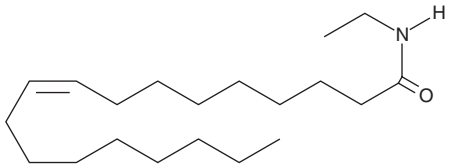
PRODUCT INFORMATION

Oleoyl ethyl amide

Catalog No. 10005459

CAS Registry No.: 85075-82-7
Formal Name: N-ethyl-9Z-octadecenamide
Synonyms: OEtA; N-Ethyloleamide
MF: $C_{20}H_{39}NO$
FW: 309.5
Purity: ≥98%
Supplied as: A solution in methyl acetate
Storage: -20°C
Stability: ≥2 years



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

Laboratory Procedures

OEtA is supplied as a solution in methyl acetate. To change the solvent, simply evaporate the methyl acetate under a gentle stream of nitrogen and immediately add the solvent of choice. Solvents such as ethanol, DMSO, and dimethyl formamide purged with an inert gas can be used. The solubility of OEtA in these solvents is approximately 50 mg/ml.

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 OEtA is needed, it can be prepared by evaporating the methyl acetate and directly dissolving the neat oil in aqueous buffers. The solubility of OEtA in PBS (pH 7.2) is approximately 0.15 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

Numerous analogs of fatty acyl ethanolamides potentiate the intrinsic biological activity of arachidonoyl ethanolamide (anandamide; AEA).[1] This potentiation is ascribed either to inhibition of AEA reuptake into neurons, or inhibition of fatty amide acyl hydrolase (FAAH) within the neurons.[2] OEtA has potent FAAH inhibitory activity (IC_{50} = 5.25 nM in rat brain homogenates) but does not inhibit acidic PEAase or bind to CB_1 or CB_2 receptors. OEtA is therefore a selective FAAH inhibitor with potential analgesic and anxiolytic activity.[3]

References

1. Khanolkar, A.D. and Makriyannis, A. Structure-activity relationships of anandamide, an endogenous cannabinoid ligand. *Life Sci.* **65**, 607-616 (1999).
2. Deutsch, D.G., Glaser, S.T., Howell, J.M., *et al.* The cellular uptake of anandamide is coupled to its breakdown by fatty-acid amide hydrolase. *J. Biol. Chem.* **276(10)**, 6967-6973 (2001).
3. Vandevoorde, S., Lavand'homme, P., Fowler, C.J., *et al.* Oleoylethylamide, an analgesic FAAH inhibitor which modulates endogenous anandamide, oleoylethanolamide and 2-arachidonoylglycerol levels in the brain. *14th Annual Symposium on the Cannabinoids* **15** (2004).

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.

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