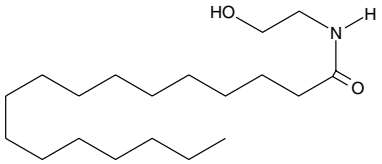
Product Information

Heptadecanoyl Ethanolamide

Item No. 90342

CAS Registry No.:	53832-59-0
Formal Name:	N-(2-hydroxyethyl)-heptadecanamide
MF:	$C_{19}H_{39}NO_2$
FW:	313.5
Purity:	≥98%
Stability:	≥2 years at -20°C
Supplied as:	A crystalline solid



Laboratory Procedures

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

Heptadecanoyl ethanolamide is supplied as a crystalline solid. A stock solution may be made by dissolving the heptadecanoyl ethanolamide in an organic solvent purged with an inert gas. Heptadecanoyl ethanolamide is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of heptadecanoyl ethanolamide in these solvents is approximately 4, 2.5, and 2 mg/ml respectively.

Heptadecanoyl ethanolamide is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, heptadecanoyl ethanolamide should first be dissolved in ethanol and then diluted with the aqueous buffer of choice. Heptadecanoyl ethanolamide has a solubility of approximately10 µg/ml in a 1:10 solution of ethanol:PBS (pH 7.2) using this method (to obtain this solubility the solution must be warmed in a boiling water bath). We do not recommend storing the aqueous solution for more than one day.

Palmitoyl ethanolamide (PEA) is an endogenous cannabinoid found in brain, liver, and other mammalian tissues.[1] PEA has also been isolated from egg yolk, and found to have antianaphylactic and anti-inflammatory activity *in vitro*.[2] Heptadecanoyl ethanolamide is a synthetic analog of PEA which incorporates an odd-numbered (17-carbon) fatty acid chain. This analog is unlikely to be present in any natural tissue, and so can be used as an internal standard for quantitative analysis. Heptadecanoyl ethanolamide potentiates the Ca^{2+} influx response to arachidonyl ethanolamide several fold in cells expressing human recombinant vanilloid $receptor_1$.[3]

References

1. Bachur, N.R., Masek, K., Melmon, K.L., *et al.* Fatty acid amides of ethanolamine in mammalian tissues. *J. Biol. Chem.* **240**, 1019-1024 (1965).
2. Ganley, O.H., Graessle, O.E., Robinson, H.J., *et al.* Anti-inflammatory activity of compounds obtained from egg yolk, peanut oil, and soybean lecithin. *J. Lab. Clin. Med.* **51**, 709-714 (1958).
3. 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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