

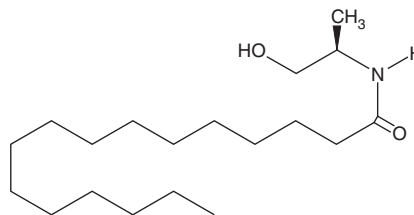
# PRODUCT INFORMATION



## R-Palmitoyl-(1-methyl) Ethanolamide

Item No. 90353

**CAS Registry No.:** 142128-47-0  
**Formal Name:** N-(2-hydroxy-1R-methylethyl)-hexadecanamide  
**MF:** C<sub>19</sub>H<sub>39</sub>NO<sub>2</sub>  
**FW:** 313.5  
**Purity:** ≥98%  
**Supplied as:** A crystalline solid  
**Storage:** -20°C  
**Stability:** ≥2 years



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

### Laboratory Procedures

R-Palmitoyl-(1-methyl) ethanolamide is supplied as a crystalline solid. A stock solution may be made by dissolving the R-palmitoyl-(1-methyl) ethanolamide in the solvent of choice, which should be purged with an inert gas. R-Palmitoyl-(1-methyl) ethanolamide is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of R-palmitoyl-(1-methyl) ethanolamide in these solvents is approximately 10, 25, and 3.3 mg/ml, respectively.

R-Palmitoyl-(1-methyl) ethanolamide is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, R-palmitoyl-(1-methyl) ethanolamide should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. R-Palmitoyl-(1-methyl) ethanolamide has a solubility of approximately 1 µg/ml in a 1:7 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

### Description

Palmitoyl ethanolamide (PEA) is an endogenous cannabinoid found in brain, liver, and other mammalian tissues.<sup>1</sup> PEA has also been isolated from egg yolk and found to have anti-anaphylactic and anti-inflammatory activity *in vitro*.<sup>2</sup> R-palmitoyl-(1-methyl) ethanolamide is a synthetic analog of PEA which incorporates an (R)-methyl group vicinal to the alcohol on the ethanolamine moiety. The analogous modification to arachidonyl ethanolamide (AEA) protects the molecule from hydrolysis by fatty acid amide hydrolase (FAAH). This leads to prolonged duration of action and enhanced potency *in vivo*.<sup>3</sup> R-palmitoyl-(1-methyl) ethanolamide would be expected to show enhancement of the inhibitory action of PEA on mast cells and other cells known to express the CB<sub>2</sub> receptor. However, there are no published studies on the use of this compound to date.

### 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(5)**, 709-714 (1958).
3. Abadji, V., Lin, S., Taha, G., *et al.* (R)-Methanandamide: A chiral novel anandamide possessing higher potency and metabolic stability. *J. Med. Chem.* **37(12)**, 1889-1893 (1994).

#### 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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