

PRODUCT INFORMATION



(R)-(+)-Eicosapentaenyl-1'-Hydroxy-2'-Propylamide

Item No. 9001225

Formal Name: N-((R)-1-hydroxypropan-2-yl)icosapenta-5Z,8Z,11Z,14Z,17Z-pentaenamide

MF: C₂₃H₃₇NO₂

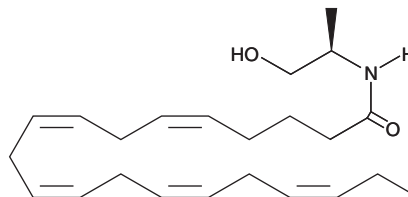
FW: 359.6

Purity: ≥98%

Supplied as: A solution in ethanol

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)-(+)-Eicosapentaenyl-1'-hydroxy-2'-propylamide is supplied as a solution in ethanol. To change the solvent, simply evaporate the ethanol 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 (R)-(+)-eicosapentaenyl-1'-hydroxy-2'-propylamide in these solvents is approximately 20, 10, and 11 mg/ml, respectively.

(R)-(+)-Eicosapentaenyl-1'-hydroxy-2'-propylamide is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, the ethanolic solution of (R)-(+)-eicosapentaenyl-1'-hydroxy-2'-propylamide should be diluted with the aqueous buffer of choice. (R)-(+)-Eicosapentaenyl-1'-hydroxy-2'-propylamide has a solubility of approximately 0.3 mg/ml in a 1:2 solution of ethanol:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

N-Acyl ethanolamines (NAEs) have diverse biological actions that are strongly affected by the associated acyl group. Eicosapentaenoyl ethanolamide (EPEA) has potential signaling roles in aging, cancer, inflammation, and neurological development.¹⁻⁴ At least some of EPEA's effects are mediated through cannabinoid (CB) receptors, while some NAEs also act as vanilloid receptor agonists.^{1,5} R-(+)-Eicosapentaenyl-1'-hydroxy-2'-propylamide is a homolog of EPEA, characterized by the addition of an (R)- α -methyl group at the methylene carbon adjacent to the amide nitrogen. A similar modification of arachidonoyl ethanolamide (Item No. 90050) to produce R-1 methanandamide (Item No. 90070) imparts higher affinity for the CB receptor as well as improved metabolic stability.⁶ The physiological actions of this compound have not been evaluated.

References

1. Brown, I., Cascio, M.G., Wahle, K.W.J., *et al. Carcinogenesis* **31**(9), 1584-1591 (2010).
2. Kim, H.-Y., Moon, H.-S., Cao, D., *et al. Biochem. J.* **435**, 327-336 (2011).
3. Balvers, M.G., Verhoeckx, K.C., Plastina, P., *et al. Biochim. Biophys. Acta* **1801**(10), 1107-1114 (2010).
4. Lucanic, M., Held, J.M., Vantipalli, M.C., *et al. Nature* **473**(7346), 226-9 (2011).
5. Calignano, A., LaRana, G., and Piomelli, D. *Eur. J. Pharmacol.* **419**(2-3), 191-198 (2001).
6. Abadji, V., Lin, S., Taha, G., *et al. J. Med. Chem.* **37**, 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.

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, 02/07/2024

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