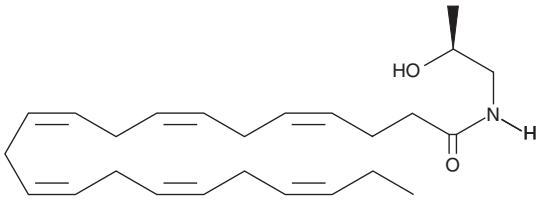
PRODUCT INFORMATION

(S)-(+)-Docosahexaenyl-2'-Hydroxy-1'-Propylamide

Item No. 9001231

Formal Name: N-((S)-2-hydroxypropyl)docosa-4Z,7Z,10Z,13Z,16Z,19Z-hexaenamide
MF: $C_{25}H_{39}NO_2$
FW: 385.6
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

(S)-(+)-Docosahexaenyl-2'-hydroxy-1'-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 (DMF) purged with an inert gas can be used. The solubility of (S)-(+)-docosahexaenyl-2'-hydroxy-1'-propylamide in ethanol and DMSO is approximately 14 mg/ml and approximately 2 mg/ml in DMF.

(S)-(+)-Docosahexaenyl-2'-hydroxy-1'-propylamide is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, the ethanolic solution of (S)-(+)-docosahexaenyl-2'-hydroxy-1'-propylamide should be diluted with the aqueous buffer of choice. (S)-(+)-Docosahexaenyl-2'-hydroxy-1'-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. Docosahexaenoyl ethanolamide (DHEA) has potential signaling roles in cancer, inflammation, and neurological development and functioning.[1-4] At least some of DHEA's effects are mediated through cannabinoid (CB) receptors, while some NAEs also act as vanilloid receptor agonists and voltage-gated K^+ channel blockers.[1,4,5] (S)-(+)-Docosahexaenyl-2'-hydroxy-1'-propylamide is a homolog of DHEA, characterized by the addition of an (S)-β-methyl group at the terminal ethanolamine carbon. A similar modification of arachidonoyl ethanolamide (Item No. 90050) to produce S-2 methanandamide (Item No. 90076) imparts higher affinity for the CB receptor.[6] The physiological actions of this compound have not been evaluated.

References

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