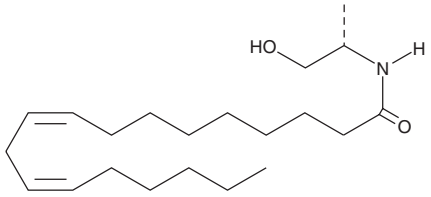
PRODUCT INFORMATION

(S)-(-)-Linoleyl-1'-Hydroxy-2'-Propylamide

Item No. 9001236

Formal Name:	N-((S)-1-hydroxypropan-2-yl) octadeca-9Z,12Z-dienamide
MF:	$C_{21}H_{39}NO_2$
FW:	337.50
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)-(-)-Linoleyl-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 (S)-(-)-linoleyl-1'-hydroxy-2'-propylamide in these solvents is approximately 20, 5, and 11 mg/ml, respectively.

(S)-(-)-Linoleyl-1'-hydroxy-2'-propylamide is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, the ethanolic solution of (S)-(-)-linoleyl-1'-hydroxy-2'-propylamide should be diluted with the aqueous buffer of choice. (S)-(-)-linoleyl-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. Linoleoyl ethanolamide (LOEA) has potential signaling roles in aging and neurological functioning.[1,2] LOEA has a weak affinity for cannabinoid (CB) receptors (K_i = 10 and 25 µM for CB_1 and CB_2, respectively).[3] It also inhibits fatty acid amide hydrolase (FAAH; K_i = 9 µM) and is hydrolyzed by FAAH, and inhibits voltage-gated K^+ channels.[4-6] (S)-(-)-Linoleyl-1'-hydroxy-2'-propylamide is a homolog of LOEA, characterized by the addition of an (S)-α-methyl group at the methylene carbon adjacent to the amide nitrogen. A similar modification of arachidonoyl ethanolamide (Item No. 90050) to produce S-1 methanandamide (Item No. 90072) results in a diminished affinity for the CB receptor but greatly improved metabolic stability to aminopeptidase hydrolysis.[7] The physiological actions of this compound have not been evaluated.

References

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