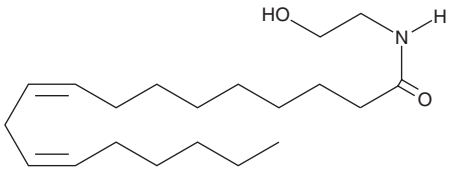
PRODUCT INFORMATION

Linoleoyl Ethanolamide

Item No. 90155

CAS Registry No.:	68171-52-8
Formal Name:	N-(2-hydroxyethyl)-9Z,12Z-octadecadienamide
Synonym:	LEA
MF:	$C_{20}H_{37}NO_2$
FW:	323.5
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

Linoleoyl ethanolamide 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 DMSO and dimethyl formamide purged with an inert gas can be used. The solubility of linoleoyl ethanolamide in these solvents is at least 25 mg/ml.

Linoleoyl ethanolamide is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, the ethanolic solution of linoleoyl ethanolamide should be diluted with the aqueous buffer of choice. Linoleoyl ethanolamide has a solubility of 100 µg/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

Linoleoyl ethanolamide is an endocannabinoid detected in porcine brain and murine peritoneal macrophages which contains linoleate in place of the arachidonate moiety of arachidonoyl ethanolamide (AEA).[1,2] It has weak affinity for the cannabinoid 1 (CB_1) and CB_2 receptors, exhibiting K_i values of 10 µM and 25 µM, respectively.[3] However, it is only approximately 4-fold less potent than AEA at causing catalepsy in mice (ED_{50} = 26.5 mg/kg).[4] In addition, linoleoyl ethanolamide increases ERK phosphorylation and AP-1-dependent transcription approximately 1.5 fold at 15 µM in a CB-receptor-independent manner.[5] However, cellular toxicity is readily apparent at concentrations of 10-20 µM. Linoleoyl ethanolamide inhibits human fatty acid amide hydrolase-dependent hydrolysis of AEA with a K_i value of 9.0 µM, but also is hydrolyzed effectively by the enzyme.[6,7]

References

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