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PRODUCT INFORMATION



Linoleoyl Ethanolamide-d₄

Item No. 9000553

CAS Registry No.: 1451194-69-6

Formal Name: N-(2-hydroxyethyl-1,1,2,2-d₄)-9Z,12Z-octadecadienamide

MF: C₂₀H₃₃D₄NO₂

FW: 327.5

Chemical Purity: ≥98%

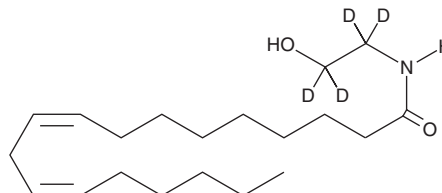
Deuterium

Incorporation: ≥99% deuterated forms (d₁-d₄); ≤1% d₀

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-d₄ is intended for use as an internal standard for the quantification of linoleoyl ethanolamide (Item No. 90155) by GC- or LC-MS. The accuracy of the sample weight in this vial is between 5% over and 2% under the amount shown on the vial. If better precision is required, the deuterated standard should be quantitated against a more precisely weighed unlabeled standard by constructing a standard curve of peak intensity ratios (deuterated versus unlabeled).

Linoleoyl ethanolamide-d₄ 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-d₄ in either of these solvents is approximately 25 mg/ml.

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 central cannabinoid (CB₁) and peripheral cannabinoid (CB₂) 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 (ED₅₀ of 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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2. Schmid, P.C., Kuwae, T., Krebsbach, R.J., *et al.* *Chem. Phys. Lipids* **87**, 103-110 (1997).
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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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