Arachidonoyl amide

Item No. 10007295

CAS Registry No.: 85146-53-8
Formal Name: 5Z,8Z,11Z,14Z-eicosatetraenamide
Synonyms: Arachidonamide, Arachidonic Acid amide
MF: C20H33NO
FW: 303.5
Purity: ≥98%
Stability: ≥1 year at -20°C
Supplied as: A solution in methyl acetate

Laboratory Procedures
For long term storage, we suggest that arachidonoyl amide be stored as supplied at -20°C. It will be stable for at least one year.

Arachidonoyl amide is supplied as a solution in methyl acetate. To change the solvent, simply evaporate the methyl acetate 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 arachidonoyl amide in these solvents is approximately 10 mg/ml.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. For greater aqueous solubility, arachidonoyl amide can be directly dissolved in 0.1 M Na2CO3 (1 mg/ml) and then diluted with PBS (pH 7.2) to achieve the desired concentration or pH. We do not recommend storing the aqueous solution for more than one day.

Anandamide (AEA) is an endogenous cannabinoid that binds to both central cannabinoid (CB1) and peripheral cannabinoid (CB2) receptors. The biological actions of AEA are terminated by cellular uptake and hydrolysis of the amide bond by the fatty acid amide hydrolase (FAAH). Arachidonoyl amide is an analog of AEA that lacks the hydroxyethyl moiety. It is hydrolyzed by FAAH more effectively than AEA but exhibits significantly weaker binding to the human CB1 receptor with a Kd of 9.6 µM.1,2 Arachidonoyl amide and AEA exhibit similar binding and translocation into cells via the AEA transporter. It inhibits [³H]-AEA uptake into human astrocytoma cells with an IC50 of 9 µM.3 Arachidonoyl amide also inhibits rat glial gap junction cell-cell communication by 90% at a concentration of 20 µM.4

References

Related Products
Arachidonoyl Serinol - Item No. 62170 • Arachidonoyl Ethanolamide - Item No. 90050 • Arachidonoyl Glycine - Item No. 90051 • Arachidonoyl 2-Fluoroethylamide - Item No. 90054 • Arachidonoyl-N,N-dimethyl amide - Item No. 10007293 • Arachidonoyl-N,N-methyl amide - Item No. 10007294 • N-(3-hydroxy phenyl)-Arachidonoyl amide - Item No. 10007704

WARNING: This product is for laboratory research only; not for administration to humans. Not for human or veterinary diagnostic or therapeutic use.