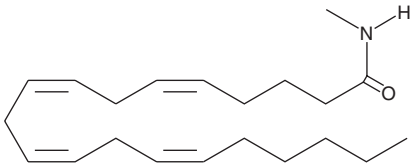
PRODUCT INFORMATION

Arachidonoyl-N-methyl amide

Item No. 10007294

CAS Registry No.: 156910-29-1
Formal Name: N-methyl-5Z,8Z,11Z,14Z-eicosatetraenamide
MF: $C_{21}H_{35}NO$
FW: 317.5
Purity: ≥98%
Supplied as: A solution in methyl acetate
Storage: -20°C
Stability: ≥2 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

Arachidonoyl-N-methyl 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-N-methyl amide in these solvents is approximately 10 mg/ml.

Arachidonoyl-N-methyl amide is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, the methyl acetate solution of arachidonoyl-N-methyl amide should be diluted with the aqueous buffer of choice. The solubility of arachidonoyl-N-methyl amide in 0.1 M Na_2CO_3 is approximately 1 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

Anandamide (AEA) is an endogenous cannabinoid that binds to both central cannabinoid (CB_1) and peripheral cannabinoid (CB_2) receptors. The biological actions of AEA are terminated by cellular uptake and hydrolysis of the amide bond by the enzyme fatty acid amide hydrolase. Arachidonoyl-N-methyl amide is an analog of AEA that binds to the human CB_1 receptor with a K_i of 60 nM.[1] It inhibits rat glial gap junction cell-cell communication 100% at a concentration of 50 µM.[2]

References

1. Sheskin, T., Hanus, L., Slager, J., *et al.* Structural requirements for binding of anandamide-type compounds to the brain cannabinoid receptor. *J. Med. Chem.* **40(5)**, 659-667 (1997).
2. Boger, D.L., Sato, H., Lerner, A.E., *et al.* Arachidonic acid amide inhibitors of gap junction cell-cell communication. *Bioorg. Medicinal Chem. Letters* **9(8)**, 1151-1154 (1999).

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