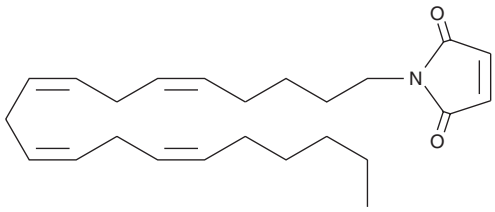
PRODUCT INFORMATION

N-Arachidonyl Maleimide

Item No. 10007517

CAS Registry No.:	876305-42-9
Formal Name:	eicosa-5Z,8Z,11Z,14Z-tetraenyl-1-pyrrole-2,5-dione
Synonym:	NAM
MF:	$C_{24}H_{35}NO_2$
FW:	369.5
Purity:	≥98%
Supplied as:	A solution in methyl acetate
Storage:	-80°C
Stability:	≥2 years



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

Laboratory Procedures

N-Arachidonyl maleimide (NAM) 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 (DMF) purged with an inert gas can be used. The solubility of NAM in ethanol is approximately 50 mg/ml and approximately 30 mg/ml in DMSO and DMF.

Description

2-Arachidonoyl glycerol (2-AG) is an endogenous agonist of the central cannabinoid (CB_1) and peripheral cannabinoid (CB_2) receptors.[1-3] 2-AG is present at relatively high levels in the central nervous system and is the most abundant molecular species of monoacylglycerol found in rat brain.[1,4] Monoacylglycerol lipase (MGL) hydrolyzes 2-AG to arachidonic acid and glycerol, thereby terminating its biological actions.[5] NAM is a potent, irreversible inhibitor of MGL or MGL-like activity in rat cerebellar membranes, exhibiting an IC_{50} value of 140 nM.[6] Inhibition of MGL by the sulfhydryl-reactive maleimide group of NAM suggests a critical cysteine residue is present in the substrate-binding site of the enzyme.

References

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4. Kondo, S., Kondo, H., Nakane, S., *et al. FEBS Lett.* **429**, 152-156 (1998).
5. Dinh, T.P., Carpenter, D., Leslie, F.M., *et al. Proc. Natl. Acad. Sci. USA* **99(16)**, 10819-10824 (2002).
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