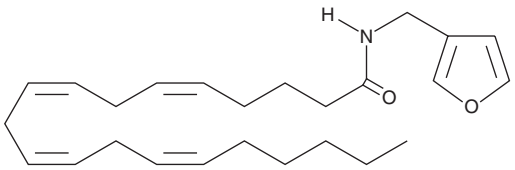
PRODUCT INFORMATION

UCM707

Item No. 10045

CAS Registry No.:	390824-20-1
Formal Name:	N-(3-furanylmethyl)-5Z,8Z,11Z,14Z-eicosatetraenamide
MF:	$C_{25}H_{37}NO_2$
FW:	383.6
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

UCM707 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 UCM707 in ethanol and DMF is approximately 30 mg/ml and approximately 20 mg/ml in DMSO.

UCM707 is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, the methyl acetate solution of UCM707 should be diluted with the aqueous buffer of choice. UCM707 has a solubility of 0.25 mg/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

Numerous analogs of arachidonoyl ethanolamide (AEA, anandamide) potentiate its biological activity.[1] This potentiation is ascribed either to inhibition of AEA reuptake into neurons, or inhibition of fatty acid amide hydrolase (FAAH) within the neurons.[2] One of the more potent and selective reuptake inhibitors is UCM707, a 3-furyl arachidonoyl analog. UCM707 has an IC_{50} of 0.8 µM for the inhibition of tritiated AEA uptake into human U937 cells but has low affinity for FAAH, exhibiting an IC_{50} value of 30 µM.[3] UCM707 also potentiates the biological effects of AEA when co-administered in rats.[4]

References

1. Devane, W.A., Hanus, L., Breuer, A., *et al.* Isolation and structure of a brain constituent that binds to the cannabinoid receptor. *Science* **258(5090)**, 1946-1949 (1992).
2. Deutsch, D.G., Glaser, S.T., Howell, J.M., *et al.* The cellular uptake of anandamide is coupled to its breakdown by fatty-acid amide hydrolase. *J. Biol. Chem.* **276(10)**, 6967-6973 (2001).
3. López-Rodriguez, M.L., Viso, A., Ortega-Gutiérrez, S., *et al.* Design, synthesis, and biological evaluation of new endocannabinoid transporter inhibitors. *Eur. J. Med. Chem.* **38(4)**, 403-412 (2003).
4. de Lago, E., Fernandez-Ruiz, J., Ortega-Gutiérrez, S., *et al.* UCM707, a potent and selective inhibitor of endocannabinoid uptake, potentiates hypokinetic and antinociceptive effects of anandamide. *Eur. J. Pharmacol.* **449(1-2)**, 99-103 (2002).

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