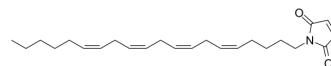


N-Arachidonyl maleimide

Cat. No.:	HY-136562
CAS No.:	876305-42-9
Molecular Formula:	C ₂₄ H ₃₅ NO ₂
Molecular Weight:	369.54
Target:	MAGL
Pathway:	Metabolic Enzyme/Protease
Storage:	-80°C



SOLVENT & SOLUBILITY

In Vitro	DMSO : 100 mg/mL (270.61 mM; Need ultrasonic)						
	Preparing Stock Solutions	Solvent Concentration	Mass	1 mg	5 mg	10 mg	
				1 mM	2.7061 mL	13.5303 mL	27.0607 mL
				5 mM	0.5412 mL	2.7061 mL	5.4121 mL
				10 mM	0.2706 mL	1.3530 mL	2.7061 mL
Please refer to the solubility information to select the appropriate solvent.							
In Vivo	1. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline Solubility: ≥ 2.5 mg/mL (6.77 mM); Clear solution						
	2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline) Solubility: 2.5 mg/mL (6.77 mM); Suspended solution; Need ultrasonic						
	3. Add each solvent one by one: 10% DMSO >> 90% corn oil Solubility: ≥ 2.5 mg/mL (6.77 mM); Clear solution						

BIOLOGICAL ACTIVITY

Description	N-Arachidonyl maleimide is a potent, irreversible inhibitor of monoacylglycerol lipase (MAGL) with an IC ₅₀ value of 140 nM ^[1] .
IC ₅₀ & Target	IC ₅₀ : 140 nM (MAGL) ^[1]
In Vitro	N-Arachidonyl maleimide is a putative MAGL inhibitor, which can be used for modulation of the effects of 2-arachidonyl glycerol (2-AG). N-Arachidonyl maleimide increases endogenous levels of 2-AG in the brain. N-Arachidonyl maleimide prevents cerebellar membrane-mediated degradation of 2-AG at a relatively low concentration (IC ₅₀ , 140 nM) ^[1] . MCE has not independently confirmed the accuracy of these methods. They are for reference only.

In Vivo

When combined with a 1 mg/kg dose of N-Arachidonyl maleimide, 2-AG (1, 3, and 10 mg/kg) produces significant and dose-dependent hypothermia, inhibition of locomotor activity, antinociception, and catalepsy^[1].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

- [1]. Susanna M Saario, et al. Characterization of the Sulfhydryl-Sensitive Site in the Enzyme Responsible for Hydrolysis of 2-arachidonoyl-glycerol in Rat Cerebellar Membranes. *Chem Biol.* 2005 Jun;12(6):649-56.
- [2]. James J Burston, et al. N-arachidonyl Maleimide Potentiates the Pharmacological and Biochemical Effects of the Endocannabinoid 2-arachidonylglycerol Through Inhibition of Monoacylglycerol Lipase. *J Pharmacol Exp Ther.* 2008 Nov;327(2):546-53.
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Caution: Product has not been fully validated for medical applications. For research use only.

Tel: 609-228-6898

Fax: 609-228-5909

E-mail: tech@MedChemExpress.com

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA