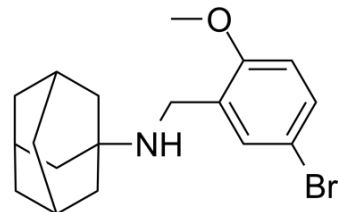


ABMA

Cat. No.:	HY-124801		
CAS No.:	332108-65-3		
Molecular Formula:	C ₁₈ H ₂₄ BrNO		
Molecular Weight:	350.29		
Target:	Bacterial; Influenza Virus; Parasite		
Pathway:	Anti-infection		
Storage:	Powder	-20°C	3 years
		4°C	2 years
	In solvent	-80°C	6 months
		-20°C	1 month



SOLVENT & SOLUBILITY

In Vitro

DMSO : 125 mg/mL (356.85 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent Concentration	Mass		
		1 mg	5 mg	10 mg
	1 mM	2.8548 mL	14.2739 mL	28.5478 mL
	5 mM	0.5710 mL	2.8548 mL	5.7096 mL
	10 mM	0.2855 mL	1.4274 mL	2.8548 mL

Please refer to the solubility information to select the appropriate solvent.

In Vivo

- Add each solvent one by one: **10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline**
Solubility: ≥ 6.25 mg/mL (17.84 mM); Clear solution
- Add each solvent one by one: **10% DMSO >> 90% (20% SBE-β-CD in saline)**
Solubility: ≥ 6.25 mg/mL (17.84 mM); Clear solution
- Add each solvent one by one: **10% DMSO >> 90% corn oil**
Solubility: ≥ 6.25 mg/mL (17.84 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

ABMA is a broad-spectrum inhibitor of intracellular toxins and pathogens. ABMA efficiently protects cells against various toxins and pathogens including **viruses**, **intracellular bacteria** and **parasite**. ABMA selectively acts at host cell late endosomes rather than targeting toxin or pathogen itself. ABMA has broad-spectrum anti-infection activity^{[1][2]}.

IC₅₀ & Target

Intracellular bacteria^[1]
Viruses^[1]

	Parasite ^[1]								
In Vitro	<p>ABMA protects cells against four bacterial toxins (Corynebacterium diphtheriae (DT; EC₅₀ of 62.9 μM), Bacillus anthracis (LT), Clostridium difficile toxin B (TcdB; EC₅₀ of 73.3 μM), Clostridium sordellii lethal toxin (TcsL; EC₅₀ of 86.7 μM)), three viruses (Ebola (EC₅₀ of 3.3 μM), rabies (EC₅₀ of 19.4 μM), dengue-4 virus (EC₅₀ of 8.2 μM)), two species of Chlamydiales intracellular bacteria (Simkania negevensis and Chlamydia trachomatis), and the parasite Leishmania infantum (EC₅₀ of 7.1 μM) at micromolar level^[1].</p> <p>In A549 cells, ABMA treatment induces a decrease in ricin cytotoxicity with an EC₅₀ of 3.8 μM, and a protection factor (R) at 30 μM ranging from 5 to 10. ABMA retained almost 100% of its biological activity against ricin-induced cytotoxicity up to six days^[1].</p>								
In Vivo	<p>ABMA (2-200 mg/kg; intraperitoneal injection; female BALB/c mice) treatment protects mice from nasal instillation of an LD₉₀ of ricin^[1].</p> <table border="1"> <tr> <td>Animal Model:</td> <td>Pathogen-free female BALB/c mice (6 week-old) with ricin^[1]</td> </tr> <tr> <td>Dosage:</td> <td>2 mg/kg, 20 mg/kg, 200 mg/kg</td> </tr> <tr> <td>Administration:</td> <td>Intraperitoneal injection</td> </tr> <tr> <td>Result:</td> <td>A statistically significant protection according to survival curves was observed with a single ip dose of 2 mg/kg. The 20 mg/kg dose fully protected animals through to day 21. The 200 mg/kg dose resulted in 80% of protection of mice against ricin challenge with a single animal succumbing on day 15.</td> </tr> </table>	Animal Model:	Pathogen-free female BALB/c mice (6 week-old) with ricin ^[1]	Dosage:	2 mg/kg, 20 mg/kg, 200 mg/kg	Administration:	Intraperitoneal injection	Result:	A statistically significant protection according to survival curves was observed with a single ip dose of 2 mg/kg. The 20 mg/kg dose fully protected animals through to day 21. The 200 mg/kg dose resulted in 80% of protection of mice against ricin challenge with a single animal succumbing on day 15.
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REFERENCES

[1]. Wu Y, et al. ABMA, a small molecule that inhibits intracellular toxins and pathogens by interfering with late endosomal compartments.

[2]. Wu Y, et al. DABMA: A Derivative of ABMA with Improved Broad-Spectrum Inhibitory Activity of Toxins and Viruses. ACS Med Chem Lett. 2019 Jul 2;10(8):1140-1147.

Caution: Product has not been fully validated for medical applications. For research use only.

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