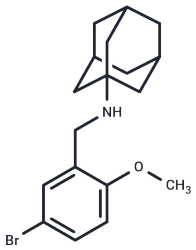
Data Sheet (Cat.No.T10222)

TargetMol

ABMA

Chemical Properties



CAS No. : 332108-65-3

Formula: C18H24BrNO

Molecular Weight: 350.29

Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year
Actual storage temperature shall be subject to the COA.

Biological Description

Description	ABMA is a broad-spectrum inhibitor of intracellular toxins and pathogens, efficiently protecting cells against various pathogens including viruses, intracellular bacteria, and parasites. ABMA selectively acts on host cell late endosomes rather than targeting the toxin or pathogen itself.
Targets(IC50)	Anti-infection,Antibacterial,Parasite
In vitro	ABMA confers cellular protection against four bacterial toxins [Corynebacterium diphtheriae (DT; EC50 of 62.9 μM), Bacillus anthracis (LT), Clostridium difficile toxin B (TcdB; EC50 of 73.3μM), Clostridium sordellii lethal toxin (TcsL; EC50 of 86.7 μM)], three viruses [Ebola (EC50 of 3.3μM), rabies (EC50 of 19.4μM), dengue-4 virus (EC50 of 8.2μM)], two species of Chlamydiales intracellular bacteria (Simkania negevensis and Chlamydia trachomatis), and the parasite Leishmania infantum (EC50 of 7.1μM) at micromolar levels. In A549 cells, ABMA treatment reduces ricin cytotoxicity with an EC50 of 3.8μM and a protection factor (R) at 30μM ranging from 5 to 10. ABMA retains almost 100% of its biological activity against ricin-induced cytotoxicity for up to six days [1].
In vivo	ABMA (2-200 mg/kg; i.p.; female BALB/c mice) treatment protects mice from nasal instillation of an LD90 of ricin[1].
Animal Research	Animal Model: Pathogen-free female BALB/c mice (6 week-old) with ricin Dosage: 2 mg/kg, 20 mg/kg, 200 mg/kg Administration: i.p. [1]

Solubility Information

Solubility	DMSO: 112.5 mg/mL (321.16 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+40% PEG300+5% Tween 80+45% Saline: 5 mg/mL (14.27 mM),Sonication is recommended. *Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one. Dissolve by heating and/or sonication if necessary. Working solution is recommended to be prepared and used immediately. The formulation provided above is for reference purposes only. In vivo formulations may vary and should be modified based on specific experimental conditions.*

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.8548 mL	14.2739 mL	28.5478 mL
5 mM	0.571 mL	2.8548 mL	5.7096 mL
10 mM	0.2855 mL	1.4274 mL	2.8548 mL
50 mM	0.0571 mL	0.2855 mL	0.571 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

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

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