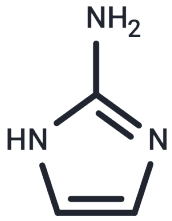
Data Sheet (Cat.No.T38241)

TargetMol

2-Aminoimidazole

Chemical Properties



CAS No. : 7720-39-0

Formula: C3H5N3

Molecular Weight: 83.09

Storage: Keep away from direct sunlight
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	2-Aminoimidazole is a potent antimicrobial agent that effectively targets drug-resistant Mycobacterium tuberculosis by disrupting the proton motive force and blocking the electron transport chain, potentiates the action of beta-lactam antibiotics against Mycobacterium tuberculosis by decreasing the secretion of beta-lactamases and increasing the permeability of cell membranes, activates drug-resistant bacteria and improves therapeutic efficacy.
Targets(IC50)	Arginase,Antibacterial
In vitro	**Methods**: Acinetobacter baumannii was treated with 2-Aminoimidazole (100 μM, 30 minutes) and live samples were observed after 30 minutes of incubation. **Results**: The fluorescein signal in live Acinetobacter baumannii samples was evenly distributed throughout the cell, with hot spots appearing within the cell boundaries. 2-Aminoimidazole can penetrate the membrane barrier. [1]

Solubility Information

Solubility	DMSO: 80 mg/mL (962.81 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: 3.3 mg/mL (39.72 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	12.0351 mL	60.1757 mL	120.3514 mL
5 mM	2.407 mL	12.0351 mL	24.0703 mL
10 mM	1.2035 mL	6.0176 mL	12.0351 mL
50 mM	0.2407 mL	1.2035 mL	2.407 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

Thompson RJ, et, al. Identification of BfmR, a response regulator involved in biofilm development, as a target for a 2-Aminoimidazole-based antibiofilm agent. Biochemistry. 2012 Dec 11;51(49):9776-8.
Jacobs L, et, al. 2-Aminoimidazoles as potent inhibitors of contaminating brewery biofilms. Biofouling. 2021 Feb 11;1-17.
Ilies M, et, al. 2-aminoimidazole amino acids as inhibitors of the binuclear manganese metalloenzyme human arginase I. J Med Chem. 2010 May 27;53(10):4266-76.

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