

Metallo- β -lactamase-IN-9

Chemical Properties

CAS No. :	1802363-75-2
Formula:	C ₁₃ H ₁₂ N ₆ O ₃ S
Molecular Weight:	332.34
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	Metallo- β -lactamase-IN-9 (Compound 23) is a broad-spectrum inhibitor of metallo-beta-lactamases (MBL), with inhibition constants (IC ₅₀) of 35 nM for NDM-1, 269 nM for VIM-1, and 369 nM for IMP-1 [1].
Targets(IC ₅₀)	Others,Antibacterial
In vivo	Metallo- β -lactamase-IN-9 (Compound 23), co-administered with Imipenem at doses of 10 and 50 mg/kg and injected subcutaneously three times daily, effectively reduced bacterial load in the spleens and kidneys of mice in a Klebsiella pneumoniae MB9249 infection model [1]. Pharmacokinetic analysis in mice showed that a single intravenous dose (1 mg/kg) produced an AUC of 27.08 μ M·h, MRT of 5.2 hours, V _{dss} of 2.97 L/kg, and Cl of 9.33 mL/min/kg. Subcutaneous administration resulted in an AUC of 27.42 μ M·h at 10 mg/kg and 111.28 μ M·h at 50 mg/kg, with C _{max} values of 13.4 μ M and 69.1 μ M and T _{max} of 0.83 and 0.5 hours, respectively. Formulations included Compound 23 at 1.0 mg/mL in 20% DMSO/60% PEG400/20% water for intravenous delivery (5 mL/kg) and at 1.0 mg/mL or 5.0 mg/mL in 30% captisol for subcutaneous injection (10 mL/kg) [1].

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	3.009 mL	15.0448 mL	30.0897 mL
5 mM	0.6018 mL	3.009 mL	6.0179 mL
10 mM	0.3009 mL	1.5045 mL	3.009 mL
50 mM	0.0602 mL	0.3009 mL	0.6018 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.

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

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Tel:781-999-4286 E_mail:info@targetmol.com Address:34 Washington Street,Wellesley Hills,MA 02481