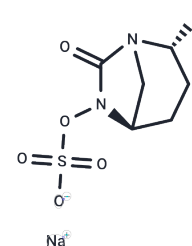


ANT3310

Chemical Properties

CAS No. :	2410688-61-6
Formula:	C ₆ H ₈ FN ₂ NaO ₅ S
Molecular Weight:	262.19
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	ANT3310 is an inhibitor of broad-spectrum covalent Serine β-Lactamase with IC ₅₀ s ranging from 1 nM to 175 nM for AmpC, CTX-M-15, TEM-1, OXA-48, OXA-23, and KPC-2. ANT3310 can be used in studies about bacterial infection.
Targets(IC ₅₀)	Antibacterial
In vitro	ANT3310 shows a low in vitro cytotoxicity (IC ₅₀ > 100 μM), cardiotoxicity (inhibition of the hERG potassium ion channel) and genotoxicity in HepG2 cell. ANT3310 (0.006 to 3 000 nM) inhibits a series of Serine β-Lactamase including AmpC, CTX-M-15, TEM-1, OXA-48, OXA-23, and KPC-2, with IC ₅₀ values ranging from 1 nM to 175 nM[1].
In vivo	In male Swiss albino mice, ANT3310 (1 mg/kg; i.v.) shows a T _{1/2} value of 0.64 h, AUC value of 412 ng•h/mL, and Cl value of 40 mL/min/kg. In the murine thigh infection model, ANT3310 (25, 50 and 100 mg/kg; i.v.) reduces bacterial burdens in a dose-dependent manner to levels below that of the initial starting inoculum at the highest dose, when treated with the combination of MEM[1].

Solubility Information

Solubility	DMSO: 50 mg/mL (190.7 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: 1 mg/mL (3.81 mM),Sonication is recommended. <i>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.</i>

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	3.814 mL	19.0701 mL	38.1403 mL
5 mM	0.7628 mL	3.814 mL	7.6281 mL
10 mM	0.3814 mL	1.907 mL	3.814 mL
50 mM	0.0763 mL	0.3814 mL	0.7628 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

David T Davies, et al. Discovery of ANT3310, a Novel Broad-Spectrum Serine β -Lactamase Inhibitor of the Diazabicyclooctane Class, Which Strongly Potentiates Meropenem Activity against Carbapenem-Resistant Enterobacterales and Acinetobacter baumannii. J Med Chem. 2020 Dec 24;63(24):15802-15820.

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

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