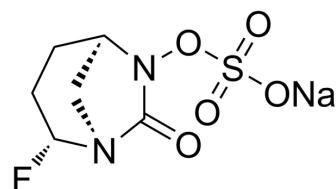


## ANT3310 sodium

<b>Cat. No.:</b>	HY-147349	
<b>CAS No.:</b>	2410688-61-6	
<b>Molecular Formula:</b>	C <sub>6</sub> H <sub>8</sub> FN <sub>2</sub> NaO <sub>3</sub> S	
<b>Molecular Weight:</b>	262.19	
<b>Target:</b>	Bacterial; Beta-lactamase	
<b>Pathway:</b>	Anti-infection	
<b>Storage:</b>	Powder	-20°C 3 years
	In solvent	-80°C 6 months
		-20°C 1 month



### SOLVENT & SOLUBILITY

#### In Vitro

DMSO : 250 mg/mL (953.51 mM; Need ultrasonic)

Concentration	Mass		
	1 mg	5 mg	10 mg
1 mM	3.8140 mL	19.0701 mL	38.1403 mL
5 mM	0.7628 mL	3.8140 mL	7.6281 mL
10 mM	0.3814 mL	1.9070 mL	3.8140 mL

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

### BIOLOGICAL ACTIVITY

#### Description

ANT3310 sodium is a broad-spectrum covalent Serine  $\beta$ -Lactamase inhibitor, with IC<sub>50</sub> values ranging from 1 nM to 175 nM (a panel of Serine  $\beta$ -Lactamase). ANT3310 sodium potentiates activity of  $\beta$ -lactam antibiotics against Carbapenem-Resistant Enterobacterales (CRE) and Acinetobacter baumannii (CRAB). ANT3310 sodium can be used in the research of bacterial infection<sup>[1][2]</sup>.

#### In Vitro

ANT3310 sodium (Compound 21, 0.006 to 3 000 nM, 10 min) inhibits a series of Serine  $\beta$ -Lactamase (AmpC, CTX-M-15, TEM-1, OXA-48, OXA-23, and KPC-2), with IC<sub>50</sub> values ranging from 1 nM to 175 nM<sup>[1]</sup>.  
 ANT3310 sodium shows a low in vitro cytotoxicity (IC<sub>50</sub>: > 100  $\mu$ M) in HepG2 cell, cardiotoxicity (inhibition of the hERG potassium ion channel), and genotoxicity (Ames test)<sup>[1]</sup>.  
 MCE has not independently confirmed the accuracy of these methods. They are for reference only.

#### In Vivo

ANT3310 sodium (intravenous injection, 25-100 mg/kg, at 1, 3, 5, and 7 h postinfection) reduces bacterial burdens in murine thigh infection model<sup>[1]</sup>.  
 ANT3310 sodium (intravenous injection, 1 mg/kg, Male Swiss albino mice) shows a T<sub>1/2</sub> value of 0.64 h, AUC value of 412 ng·h/mL, and Cl value of 40 mL/min/kg (pharmacokinetic assay)<sup>[1]</sup>.  
 MCE has not independently confirmed the accuracy of these methods. They are for reference only.

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Animal Model:	Murine thigh infection model <sup>[1]</sup>
Dosage:	25, 50, and 100 mg/kg
Administration:	Intravenous injection, at 1, 3, 5, and 7 h postinfection
Result:	Reduced bacterial burdens (colony forming units, CFU) 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.

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## REFERENCES

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[1]. David T Davies, et al. Discovery of ANT3310, a Novel Broad-Spectrum Serine  $\beta$ -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.

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

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