

Product Name:	Avibactam sodium
Product Number:	A156
CAS Number:	1192491-61-4
Molecular Formula:	C ₇ H ₁₁ N ₃ NaO ₆ S
Molecular Weight:	287.23
Form:	White to off-white powder
Storage Conditions:	-20°C
Description:	Avibactam sodium is a β-lactamase inhibitor without a β-lactam core that can inhibit class A and C enzymes, along with some class D enzymes. It is effective against <i>Enterobacteriaceae</i> . Avibactam sodium can be used for strain manipulation and drug resistance studies.
Mechanism of Action:	Avibactam is a nucleophilic serine enzyme inhibitor that contains a diazabicyclooctane (DBO) core, unlike the other β-lactamases, or PBPs (penicillin-binding protein) inhibitors, that contain a β-lactam ring.
Microbiology Applications	Avibactam is effective against Enterobacteriaceae.
References:	Abboud I et al (2016) Interaction of avibactam with class B metallo-B-lactamases. Antimicrob. Agents Chemother. 60(10):5655-5662 27401561 Ehmann DE (2012) Avibactam is a covalent, reversible, non-B-lactam B-lactamase inhibitor. PNAS 109(29):11663-1166822753474 Lagacé-Wiens PS et al (2011) Activity of NXL104 in combination with β-lactams against genetically characterized <i>Escherichia coli</i> and <i>Klebsiella pneumoniae</i> isolates producing Class A extended-spectrum β-lactamases and class C beta-lactamases. Antimicrob. Agents Chemother. 55 (5):2434-2437 21357295 Lahiri SD et al (2015) Selection and molecular characterization of ceftazidime/avibactam-resistant mutants in <i>Pseudomonas aeruginosa</i> strains containing derepressed AmpC. J. Antimicrob. Chemother 70(6):1650-1658 PMD 25645206 Lahiri, S., Olivier, N., Alm, R., Johnstone, M., & McLaughlin, R. (2014). Avibactam and class C beta-lactamases: Mechanism of inhibition, conservation of binding pocket and implications for resistance. Antimicrob. Agents Chermother. 58(10), 5704-5713.