

Plazomicin sulfate

Chemical Properties

CAS No. :	1380078-95-4
Formula:	C ₂₅ H ₄₈ N ₆ O ₁₀ .xH ₂ SO ₄
Molecular Weight:	
Storage:	Keep away from moisture, Powder: -20°C for 3 years In solvent: -80°C for 1 year <small>Actual storage temperature shall be subject to the COA.</small>

Biological Description

Description	Plazomicin sulfate is a potent aminoglycoside antibiotic that combats antibiotic resistance. Plazomicin sulfate exhibits in vitro activity against multidrug-resistant bacteria including carbapenem-resistant Enterobacteriaceae. Plazomicin sulfate is utilized in antimicrobial susceptibility testing and infectious disease research models of multidrug-resistant complicated urinary tract infection (cUTI) and carbapenem-resistant Enterobacteriaceae infection systems.
Targets(IC50)	Antibacterial,Antibiotic
In vitro	Methods:The minimum inhibitory concentrations of plazomicin sulfate against various Gram-negative bacteria were determined. Its inhibitory effects on transporters related to renal tubular secretion were evaluated, and its antibacterial activity against E. coli strains carrying aminoglycoside-modifying enzymes was verified. Results: 1.Against Klebsiella, Escherichia, Enterobacter, Serratia and Citrobacter, plazomicin sulfate showed an MIC ₅₀ of 0.25-0.5 µg/mL and an MIC ₉₀ of 0.5-1 µg/mL. 2.Plazomicin sulfate selectively inhibited MATE2-K and exerted weak effects on MATE1 and OCT2, all of which are key transporters for renal tubular secretion [1]. 3.After 18-hour treatment, plazomicin sulfate retained antibacterial activity against most E. coli BW25113 strains and E. coli BW25113 ΔbamB ΔtolC strains expressing aminoglycoside-modifying enzymes [2].

Solubility Information

Solubility	H ₂ O: 80 mg/mL,Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
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Reference

- Clark JA, et al. Plazomicin: a new aminoglycoside in the fight against antimicrobial resistance. Ther Adv Infect Dis. 2020;7:2049936120952604. Published 2020 Sep 4.
- Cox G, et al. Plazomicin Retains Antibiotic Activity against Most Aminoglycoside Modifying Enzymes. ACS Infect Dis. 2018;4(6):980-987.

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