Xeruborbactam disodium

Cat. No.: HY-136072

CAS No.: 2170848-99-2

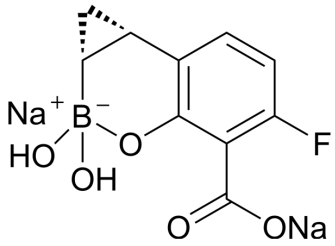
Molecular Formula: $C_{10}H_8BFNa_2O_5$

Molecular Weight: 283.96

Target: Bacterial

Pathway: Anti-infection

Storage: -20°C, sealed storage, away from moisture and light
* In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture and light)



SOLVENT & SOLUBILITY

In Vitro

DMSO : 100 mg/mL (352.16 mM; Need ultrasonic)
H_2O : 76.67 mg/mL (270.00 mM; Need ultrasonic)

Preparing Stock Solutions	Mass / Solvent / Concentration	1 mg	5 mg	10 mg
	1 mM	3.5216 mL	17.6081 mL	35.2162 mL
	5 mM	0.7043 mL	3.5216 mL	7.0432 mL
	10 mM	0.3522 mL	1.7608 mL	3.5216 mL

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

In Vivo

1. Add each solvent one by one: PBS
Solubility: 66.67 mg/mL (234.79 mM); Clear solution; Need ultrasonic

BIOLOGICAL ACTIVITY

Description

Xeruborbactam (QPX7728) disodium is a potent, ultra-broad-spectrum boronic acid beta-lactamase inhibitor. Xeruborbactam disodium inhibits key serine and metallo beta-lactamases at a nano molar range[1].

In Vitro

Xeruborbactam disodium is a potent inhibitor of Class D carbapenemases from A. baumannii[1].
Xeruborbactam disodium is minimally affected by the activity of major MDR efflux pumps from P. aeruginosa, representing a significant improvement over the earlier generation boronate beta-lactamase inhibitor (BLI) vaborbactam[1].
The ultra-broad-spectrum beta-lactamase inhibition profile combined with enhancement of the activity of multiple beta-lactam antibiotics with varying sensitivity to the intrinsic resistance mechanisms of efflux and permeability indicate Xeruborbactam disodium is a useful inhibitor for use with multiple beta-lactam antibiotics[1].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. Hecker SJ, Reddy KR, Lomovskaya O, et al. Discovery of Cyclic Boronic Acid QPX7728, an Ultrabroad-Spectrum Inhibitor of Serine and Metallo-β-lactamases. J Med Chem. 2020;63(14):7491-7507.

[2]. Lomovskaya O, et al, The Impact of Intrinsic Resistance Mechanisms on Potency of QPX7728, a New Ultra-Broad-Spectrum Beta-lactamase Inhibitor of Serine and Metallo Beta-Lactamases in Enterobacteriaceae, Pseudomonas aeruginosa, and Acinetobacter baumannii. Antimicrob Agents Chemother. 2020 Mar 30. pii: AAC.00552-20.

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