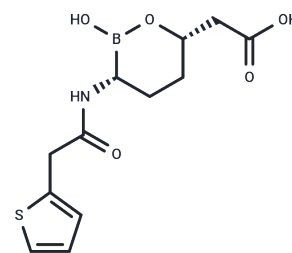


Vaborbactam

Chemical Properties

CAS No. :	1360457-46-0
Formula:	C ₁₂ H ₁₆ BN ₂ O ₅ S
Molecular Weight:	297.14
Appearance:	no data available
Storage:	Powder: -20°C for 3 years In solvent: -80°C for 1 year



Biological Description

Description	Vaborbactam (RPX7009) is a β -lactamase inhibitor that is often used in conjunction with meropenem to study pneumonia and CRE infections.
Targets(IC ₅₀)	Antibacterial
In vitro	The β -lactamase inhibitor vaborbactam can also form an acyl-enzyme complex with <i>Pseudomonas aeruginosa</i> PBP3. We found that vaborbactam inhibits PBP3 (IC ₅₀ of 262 μ M), and its binding to PBP3 increases the protein thermal stability by about 2°C[1].
In vivo	In a neutropenic mouse thigh infection model, the administration of 100 mg/kg meropenem alone and in combination with various doses of vaborbactam against <i>Klebsiella pneumoniae</i> was evaluated. The results showed that intraperitoneal injection of 300 mg/kg meropenem combined with 50 mg/kg vaborbactam resulted in the greatest reduction in bacterial counts compared to the untreated control group[2].

Solubility Information

Solubility	H ₂ O: 2 mg/mL (6.73 mM), Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
------------	--

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	3.3654 mL	16.8271 mL	33.6542 mL
5 mM	0.6731 mL	3.3654 mL	6.7308 mL
10 mM	0.3365 mL	1.6827 mL	3.3654 mL
50 mM	0.0673 mL	0.3365 mL	0.6731 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.

Reference

Kumar V, et al. Structural analysis of the boronic acid β -lactamase inhibitor vaborbactam binding to *Pseudomonas aeruginosa* penicillin-binding protein 3. PLoS One. 2021 Oct 15;16(10):e0258359.

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

This product is for Research Use Only. Not for Human or Veterinary or Therapeutic Use

Tel: 781-999-4286 E_mail: info@targetmol.com Address: 36 Washington Street, Wellesley Hills, MA 02481