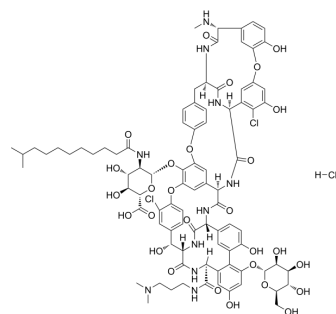


## Dalbavancin hydrochloride

<b>Cat. No.:</b>	HY-17586
<b>CAS No.:</b>	2227366-51-8
<b>Molecular Formula:</b>	C <sub>88</sub> H <sub>101</sub> Cl <sub>3</sub> N <sub>10</sub> O <sub>28</sub>
<b>Molecular Weight:</b>	1853.15
<b>Target:</b>	Bacterial; Antibiotic
<b>Pathway:</b>	Anti-infection
<b>Storage:</b>	-20°C, sealed storage, away from moisture * In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture)



### SOLVENT & SOLUBILITY

<b>In Vitro</b>	DMSO : 250 mg/mL (134.91 mM; Need ultrasonic)					
	H <sub>2</sub> O : 50 mg/mL (26.98 mM; Need ultrasonic)					
	<b>Preparing Stock Solutions</b>	<b>Solvent</b>	<b>Mass</b>	<b>1 mg</b>	<b>5 mg</b>	<b>10 mg</b>
		<b>Concentration</b>				
		<b>1 mM</b>		0.5396 mL	2.6981 mL	5.3962 mL
<b>5 mM</b>			0.1079 mL	0.5396 mL	1.0792 mL	
	<b>10 mM</b>		0.0540 mL	0.2698 mL	0.5396 mL	
Please refer to the solubility information to select the appropriate solvent.						
<b>In Vivo</b>	1. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline Solubility: ≥ 2.08 mg/mL (1.12 mM); Clear solution					
	2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline) Solubility: ≥ 2.08 mg/mL (1.12 mM); Clear solution					
	3. Add each solvent one by one: 10% DMSO >> 90% corn oil Solubility: ≥ 2.08 mg/mL (1.12 mM); Clear solution					

### BIOLOGICAL ACTIVITY

<b>Description</b>	Dalbavancin hydrochloride (MDL-63397 hydrochloride) is a semisynthetic lipoglycopeptide antibiotic with potent bactericidal activity against Gram-positive bacteria. Dalbavancin hydrochloride inhibits <i>Staphylococcus aureus</i> and <i>Bacillus anthracis</i> with MIC <sub>90</sub> s of 0.06 µg/mL and 0.25 µg/mL, respectively <sup>[1][2]</sup> .
<b>IC<sub>50</sub> &amp; Target</b>	Glycopeptide
<b>In Vitro</b>	Dalbavancin is a parenterally administered semisynthetic lipoglycopeptide developed to combat infections caused by resistant gram-positive pathogens. Dalbavancin exhibits potent in vitro bactericidal activity against gram-positive

pathogens including *S. aureus* (MRSA), VISA, and non-VanA strains of VRE. Dalbavancin is developed for the treatment of complicated skin and skin structure infections (cSSSIs), predominantly those caused by MRSA and  $\beta$ -hemolytic streptococci, organisms against which it has shown greater potency than existing glycopeptide therapeutic agents<sup>[1][2]</sup>.

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

#### In Vivo

Dalbavancin (15-240 mg/kg; intraperitoneal injection; every 36 h or 72 h; for 14 days; female BALB/c mice) treatment has a survival rate of 80% to 100% of mice with all dose regimens<sup>[1]</sup>.

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Model:	Female BALB/c mice (6-8 weeks) challenged with Ames strain of <i>B. anthracis</i> <sup>[1]</sup>
Dosage:	15 mg/kg, 30 mg/kg, 60 mg/kg, 120 mg/kg, 240 mg/kg
Administration:	Intraperitoneal injection; every 36 h or 72 h; for 14 days
Result:	The efficacy was 80 to 100%, as determined by the rate of survival at 42 days, when treatment was initiated 24 h postchallenge with regimens of 15 to 120 mg/kg every 36 h or 30 to 240 mg/kg every 72 h.

## CUSTOMER VALIDATION

- Cell Res. 2021 Jan;31(1):17-24.
- Sci Rep. 2022 Sep 26;12(1):16001.
- Antivir Res. 2020 Jun;178:104786.
- The Journal of Antibiotics . 2019 Feb;72(2):114-117.
- Enferm Infec Micr Cl. 30 July 2022.

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## REFERENCES

[1]. Heine HS, et al. Activity of dalbavancin against *Bacillus anthracis* in vitro and in a mouse inhalation anthrax model. *Antimicrob Agents Chemother*. 2010 Mar;54(3):991-6.

[2]. Bennett JW, et al. Dalbavancin in the treatment of complicated skin and soft-tissue infections: a review. *Ther Clin Risk Manag*. 2008 Feb;4(1):31-40.

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

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