Dirithromycin

Cat. No.:	HY-B0643		
CAS No.:	62013-04-1		
Molecular Formula:	C ₄₂ H ₇₈ N ₂ O ₁₄		
Molecular Weight:	835.07		
Target:	Bacterial; Antibiotic		
Pathway:	Anti-infection		
Storage:	Powder	-20°C	3 years
		4°C	2 years
	In solvent	-80°C	2 years
		-20°C	1 year

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SOLVENT & SOLUBILITY

In Vitro Ethanol : ≥ 50 mg/mL DMSO : 33.33 mg/mL * "≥" means soluble, * "≥" means soluble, Preparing Stock Solutions Stock Solutions	Ethanol : ≥ 50 mg/mL (59.88 mM) DMSO : 33.33 mg/mL (39.91 mM; Need ultrasonic) * "≥" means soluble, but saturation unknown.					
		Solvent Mass Concentration	1 mg	5 mg	10 mg	
	Preparing Stock Solutions	1 mM	1.1975 mL	5.9875 mL	11.9750 mL	
		5 mM	0.2395 mL	1.1975 mL	2.3950 mL	
	10 mM	0.1198 mL	0.5988 mL	1.1975 mL		
	Please refer to the so	lubility information to select the app	propriate solvent.			
In Vivo	1. Add each solvent one by one: 10% EtOH >> 40% PEG300 >> 5% Tween-80 >> 45% saline Solubility: ≥ 2.5 mg/mL (2.99 mM); Clear solution					
	2. Add each solvent one by one: 10% EtOH >> 90% (20% SBE-β-CD in saline) Solubility: ≥ 2.5 mg/mL (2.99 mM); Clear solution					
	3. Add each solvent of Solubility: ≥ 2.5 m	one by one: 10% EtOH >> 90% corn g/mL (2.99 mM); Clear solution	oil			

Description	Dirithromycin (LY237216), a derivative of Erythromycin, is a potent and orally active semi-synthetic macrolide antibiotic. Dirithromycin is active against gram-positive bacteria, Legionella spp., Helicobacter pylori, and Chlamydia trachomatis ^{[1][2]} .			
IC ₅₀ & Target	Macrolide			

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In Vitro	Dirithromycin possesses an in vitro spectrum of antimicrobial activity which is similar to that of Erythromycin ^[2] . Dirithromycin exhibits excellent in vitro activity against several strains of Legionella, with MICs of ~1.0 and <0.25 μg/mL at pH=7.1 and 7.4, respectively ^[2] . Dirithromycin demonstrates potent activity against several strains of Helicobacter pytori, with MICs of <0.5 μg/mL ^[2] . MCE has not independently confirmed the accuracy of these methods. They are for reference only.
In Vivo	Dirithromycin (s.c. for 2 times) is effective against experimental infections caused by S. aureus, S. pyogenes, and S. pneumoniae in mice, with ED ₅₀ s of 1.0, 0.6, and <0.6 mg/kg ^[2] . Dirithromycin (p.o. for 2 times) is effective against experimental infections caused by S. aureus, S. pyogenes, and S. pneumoniae in mice, with ED ₅₀ s of 27, 34, and 23 mg/kg ^[2] . MCE has not independently confirmed the accuracy of these methods. They are for reference only.

CUSTOMER VALIDATION

• Cell Prolif. 2021 Jan;54(1):e12953.

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REFERENCES

[1]. Wasilewski MM, et, al. Five-day dirithromycin therapy is as effective as seven-day erythromycin therapy for acute exacerbations of chronic bronchitis. J Antimicrob Chemother. 1999 Apr;43(4):541-8.

[2]. Counter FT, et, al. Synthesis and antimicrobial evaluation of dirithromycin (AS-E 136; LY237216), a new macrolide antibiotic derived from erythromycin. Antimicrob Agents Chemother. 1991 Jun;35(6):1116-26.

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

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