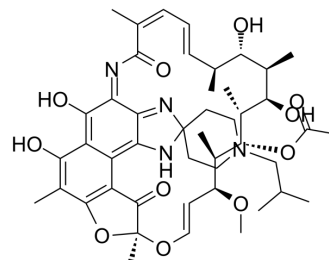


Rifabutin

Cat. No.:	HY-17025		
CAS No.:	72559-06-9		
Molecular Formula:	C ₄₆ H ₆₂ N ₄ O ₁₁		
Molecular Weight:	847		
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



SOLVENT & SOLUBILITY

In Vitro	DMSO : 50 mg/mL (59.03 mM; Need ultrasonic)					
	Preparing Stock Solutions	Solvent	Mass	1 mg	5 mg	10 mg
		Concentration				
		1 mM		1.1806 mL	5.9032 mL	11.8064 mL
5 mM			0.2361 mL	1.1806 mL	2.3613 mL	
		10 mM		0.1181 mL	0.5903 mL	1.1806 mL
Please refer to the solubility information to select the appropriate solvent.						
In Vivo	1. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline Solubility: ≥ 2.5 mg/mL (2.95 mM); Clear solution					

BIOLOGICAL ACTIVITY

Description	Rifabutin (Ansamycin) is a semisynthetic ansamycin antibiotic with potent antimycobacterial properties. Rifabutin inhibits DNA-dependent RNA polymerase.
IC₅₀ & Target	Antibacterial
In Vitro	Rifabutin is primarily bactericidal antibiotic drug used to treat tuberculosis. Its effect on bacteria is based on the DNA-dependent RNA polymerase blocking drug rifamycin S, a semi-synthetic derivative. It is effective, for example, in highly resistant mycobacteria, Gram-positive bacteria (and some are effective against Gram-negative bacteria), but also against Mycobacterium tuberculosis, M. leprae, and M. avium intracellulare. Rifabutin is an antibiotic; antitumor. Rifabutin interferes with HSP-90 molecular chaperone, enhances ubiquitination and protein degradation, and inactivates bacterial RNA polymerase. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

CUSTOMER VALIDATION

- Proc Natl Acad Sci U S A. 2023 Mar 7;120(10):e2217804120.
- Antimicrob Agents Chemother. 2023 Jan 23;e0145922.
- Microbiol Spectr. 2021 Jun 16;e0004521.
- Clin Exp Pharmacol Physiol. 2022 May 9.

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- [2]. Vourvahis M, Davis J, Wang R, Layton G, Choo HW, Chong CL, Tawadrous M. Effect of rifampin and rifabutin on the pharmacokinetics of lersivirine and effect of lersivirine on the pharmacokinetics of rifabutin and 25-o-desacetyl-rifabutin in healthy subjects. Antimicrob Agents Chemother. 2012 Aug;56(8):4303-9.
- [3]. Gisbert JP, Castro-Fernandez M, Perez-Aisa A, Cosme A, Molina-Infante J, Rodrigo L, Modolell I, Cabriada JL, Gisbert JL, Lamas E, Marcos E, Calvet X. Fourth-line rescue therapy with rifabutin in patients with three Helicobacter pylori eradication failures. Aliment Pharmacol Ther. 2012 Apr;35(8):941-7. doi: 10.1111/j.1365-2036.2012.05053.x.
- [4]. Gisbert JP, Calvet X. Review article: rifabutin in the treatment of refractory Helicobacter pylori infection. Aliment Pharmacol Ther. 2012 Jan;35(2):209-21. doi: 10.1111/j.1365-2036.2011.04937.x.
- [5]. Horne DJ, Spitters C, Narita M. Experience with rifabutin replacing rifampin in the treatment of tuberculosis. Int J Tuberc Lung Dis. 2011 Nov;15(11):1485-9, i.
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Caution: Product has not been fully validated for medical applications. For research use only.

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