

Product Information



Rifabutin

Item No. 16468

CAS Registry No.: 72559-06-9
Formal Name: (9S,12E,14S,15R,16S,17R,18R,19R,20S,21S,22E,24Z)-16-(acetyloxy)-6,18,20-trihydroxy-14-methoxy-7,9,15,17,19,21,25-heptamethyl-1'-(2-methylpropyl)-spiro[9,4-(epoxypentadeca[1,11,13]trienimino)-2H-furo[2',3':7,8]naphth[1,2-d]imidazole-2,4'-piperidine]-5,10,26(3H,9H)-trione

Synonyms: Ansamycin, LM-427

MF: C₄₆H₆₂N₄O₁₁

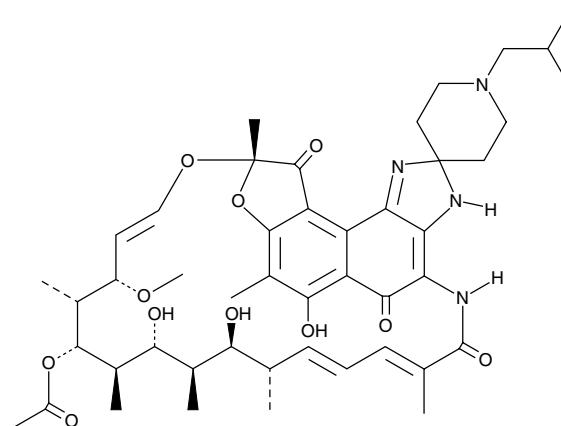
FW: 847.0

Purity: ≥98%

Stability: ≥2 years at -20°C

Supplied as: A crystalline solid

UV/Vis.: λ_{max}: 239, 277, 315, 498 nm



Laboratory Procedures

For long term storage, we suggest that rifabutin be stored as supplied at -20°C. It should be stable for at least two years.

Rifabutin is supplied as a crystalline solid. A stock solution may be made by dissolving the rifabutin in the solvent of choice. Rifabutin is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide, which should be purged with an inert gas. The solubility of rifabutin in these solvents is approximately 30 mg/ml.

Rifabutin is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, rifabutin should first be dissolved in ethanol and then diluted with the aqueous buffer of choice. Rifabutin has a solubility of approximately 0.5 mg/ml in a 1:1 solution of ethanol:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Rifamycins are antibiotics that inhibit DNA-dependent RNA polymerases and are usually bactericidal against Gram-positive bacteria but bacteriostatic against Gram-negative bacteria.¹ Rifamycins are also effective against Mycobacterium species, including *M. tuberculosis*.¹ Rifabutin is a broad-spectrum rifamycin antibiotic that has applications against tuberculosis, *H. pylori*, *M. avium* complex, *Chlamydia*, and other bacteria.²⁻⁴ It is also useful in co-infections with human immunodeficiency virus, including tuberculosis.^{5,6}

References

1. Kohanski, M.A., Dwyer, D.J., and Collins, J.J. How antibiotics kill bacteria: From targets to networks. *Nat. Rev. Microbiol.* **8(6)**, 423-435 (2010).
2. Horne, D.J., Spitters, C., and Narita, M. Experience with rifabutin replacing rifampin in the treatment of tuberculosis. *Int. J. Tuberc. Lung Dis.* **15(11)**, 1485-1489 (2011).
3. Song, M. and Ang, T.L. Second and third line treatment options for *Helicobacter pylori* eradication. *World J. Gastroenterol.* **20(6)**, 1517-1528 (2014).
4. Kunin, C.M. Antimicrobial activity of rifabutin. *Clin. Infect. Dis.* **22**, S3-S14 (1996).
5. Khan, F.A., Minion, J., Pai, M., et al. Treatment of active tuberculosis in HIV-coinfected patients: A systematic review and meta-analysis. *Clin. Infect. Dis.* **50(9)**, 1288-1299 (2010).
6. McIlleron, H., Meintjes, G., Burman, W.J., et al. Complications of antiretroviral therapy in patients with tuberculosis: Drug interactions, toxicity, and immune reconstitution inflammatory syndrome. *J. Infect. Dis.* **196**, S63-S75 (2007).

Related Products

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WARNING: THIS PRODUCT IS FOR LABORATORY RESEARCH ONLY: NOT FOR ADMINISTRATION TO HUMANS. NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until information to the contrary becomes available. Do not ingest, swallow, or inhale. Do not get in eyes, on skin, or on clothing. Wash thoroughly after handling. This information contains some, but not all, of the information required for the safe and proper use of this material. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

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