

PRODUCT INFORMATION

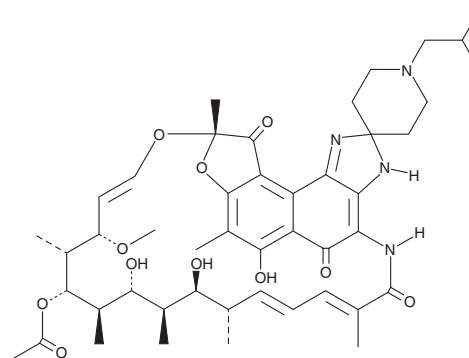


Rifabutin

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%
UV/Vis.: λ_{max}: 239, 277, 315, 498 nm
Supplied as: A crystalline solid
Storage: -20°C
Stability: ≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

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

Description

Rifabutin is a rifamycin antibiotic.^{1,2} It is active against a variety of Gram-positive and Gram-negative bacteria, including 81 clinical isolates of *H. pylori* (MIC₅₀ = 0.25 µg/ml), as well as *S. aureus*, *S. pyogenes*, and *C. trachomatis* (MICs = 0.004, 0.005, and ~0.008 µg/ml, respectively). Rifabutin (0.5 µg/ml) is also active against 302 strains of *M. tuberculosis*.² It inhibits protein synthesis via inhibition of DNA-dependent RNA polymerase (RNAP) activity.² Rifabutin (10, 20, or 40 mg/kg) reduces the number of spleen, lung, and liver colony forming units (CFUs) in mouse models of disseminated *Mycobacterium avium* complex (MAC) infection.³ Formulations containing rifabutin have been used in the treatment of *H. pylori* infection.

References

1. Heep, M., Beck, D., Bayerdörffer, E., et al. Rifampin and rifabutin resistance mechanism in *Helicobacter pylori*. *Antimicrob. Agents Chemother.* **43(6)**, 1497-1499 (1999).
2. Kunin, C.M. Antimicrobial activity of rifabutin. *Clin. Infect. Dis.* **22(Supp. 1)**, S3-S14 (1996).
3. Klemens, S.P., Grossi, M.A., and Cynamon, M.H. Comparative in vivo activities of rifabutin and rifapentine against *Mycobacterium avium* complex. *Antimicrob. Agents Chemother.* **38(2)**, (1994).

WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

WARRANTY AND LIMITATION OF REMEDY

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