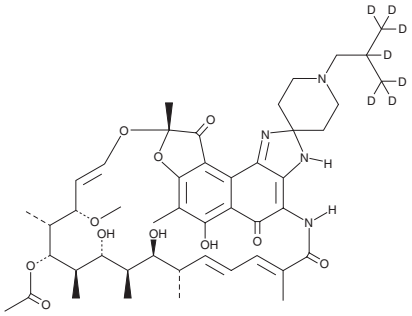
PRODUCT INFORMATION

Rifabutin-d_7

Item No. 28904



Synonym:	Ansamycin-d_7
MF:	$C_{46}H_{55}D_7N_4O_{11}$
FW:	854.1
Chemical Purity:	≥95% (Rifabutin)
Deuterium Incorporation:	≥99% deuterated forms (d_1-d_7); ≤1% d_0
Supplied as:	A solid
Storage:	-20°C
Stability:	≥2 years

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

Laboratory Procedures

Rifabutin-d_7 is intended for use as an internal standard for the quantification of rifabutin (Item No. 16468) by GC- or LC-MS. The accuracy of the sample weight in this vial is between 5% over and 2% under the amount shown on the vial. If better precision is required, the deuterated standard should be quantitated against a more precisely weighed unlabeled standard by constructing a standard curve of peak intensity ratios (deuterated *versus* unlabeled).

Rifabutin-d_7 is supplied as a solid. A stock solution may be made by dissolving the rifabutin-d_7 in the solvent of choice, which should be purged with an inert gas. Rifabutin-d_7 is slightly soluble in methanol and chloroform.

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* (MIC_{50} = 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).

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