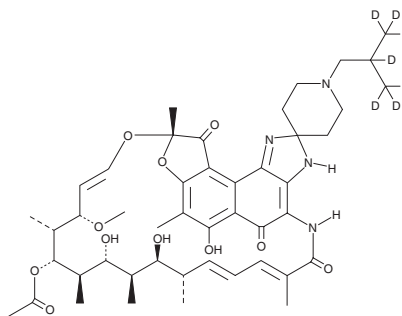


# PRODUCT INFORMATION



## Rifabutin-d<sub>7</sub> Item No. 28904

**CAS Registry No.:** 2747918-39-2  
**Synonym:** Ansamycin-d<sub>7</sub>  
**MF:** C<sub>46</sub>H<sub>55</sub>D<sub>7</sub>N<sub>4</sub>O<sub>11</sub>  
**FW:** 854.1  
**Chemical Purity:** ≥95% (Rifabutin)  
**Deuterium Incorporation:** ≥99% deuterated forms (d<sub>1</sub>-d<sub>7</sub>); ≤1% d<sub>0</sub>  
**Supplied as:** A 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-d<sub>7</sub> 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<sub>7</sub> is supplied as a solid. A stock solution may be made by dissolving the rifabutin-d<sub>7</sub> in the solvent of choice, which should be purged with an inert gas. Rifabutin-d<sub>7</sub> is slightly soluble in methanol and chloroform.

### Description

Rifabutin is a rifamycin antibiotic.<sup>1,2</sup> It is active against a variety of Gram-positive and Gram-negative bacteria, including 81 clinical isolates of *H. pylori* (MIC<sub>50</sub> = 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*.<sup>2</sup> It inhibits protein synthesis via inhibition of DNA-dependent RNA polymerase (RNAP) activity.<sup>2</sup> 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.<sup>3</sup> 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.

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