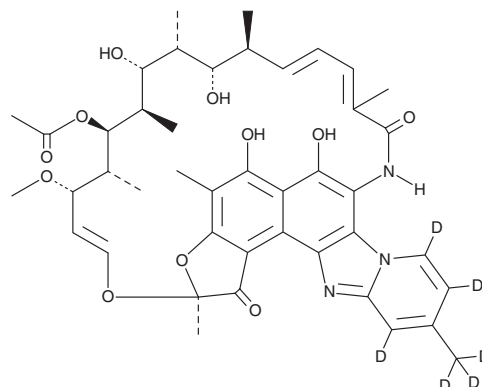


PRODUCT INFORMATION



Rifaximin-d₆ Item No. 26101

CAS Registry No.: 1262992-43-7
Formal Name: (2S,18E,28E)-25S-(acetyloxy)-5,6,21S,23R-tetrahydroxy-27S-methoxy-2,4,11,16Z,20S,22R,24R,26R-octamethyl-2,7-(epoxypentadeca[1,11,13]trienimino)benzofuro[4,5-e]pyrido[1,2-a]benzimidazole-d₆-1,15(2H)-dione
MF: C₄₃H₄₅D₆N₃O₁₁
FW: 791.9
Chemical Purity: ≥98% (Rifaximin)
Deuterium Incorporation: ≥99% deuterated forms (d₁-d₆); ≤1% d₀
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

Rifaximin-d₆ is intended for use as an internal standard for the quantification of rifaximin (Item No. 16131) 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).

Rifaximin-d₆ is supplied as a solid. A stock solution may be made by dissolving the rifaximin-d₆ in the solvent of choice, which should be purged with an inert gas. Rifaximin-d₆ is slightly soluble in chloroform and methanol.

Description

Rifaximin is an antibiotic derived from rifamycin SV (Item No. 21441) that inhibits the growth of a variety of Gram-positive and Gram-negative bacteria *in vitro*, including *Staphylococcus*, *Streptococcus*, *Enterococcus*, *H. influenzae*, and *N. gonorrhoeae* (MIC_{50S} = ≤0.015, <0.12, 0.25-2, 0.25, and 0.25 µg/ml, respectively).¹ It is a pregnane X receptor (PXR) agonist (EC₅₀ = ~20 µM) that reduces colonic damage, rectal bleeding, and diarrhea in PXR-humanized, but not wild-type or Pxr-null, mice with inflammatory bowel disease (IBD) induced by dextran sulfate sodium (DSS; Item No. 23250).^{2,3} Rifaximin exhibits minimal intestinal absorption after oral administration and is, therefore, effective in eliminating bacteria in the gastrointestinal system.^{4,5} Formulations containing rifaximin have been used in the treatment of traveler's diarrhea caused by noninvasive *E. coli*, irritable bowel syndrome with diarrhea (IBS-D), and to reduce the risk of recurrence of overt hepatic encephalopathy.

References

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2. Ma, X., Shah, Y.M., Guo, G.J., et al. *J. Pharmacol. Exp. Ther.* **322(1)**, 391-398 (2007).
3. Cheng, J., Shah, Y.M., Ma, X., et al. *J. Pharmacol. Exp. Ther.* **335(1)**, 32-41 (2010).
4. Alajbegovic, S., Sanders, J.W., Atherly, D.E., et al. *Syst. Rev.* **1:39** (2012).
5. Song, M. and Ang, T.L. *World J. Gastroenterol.* **20(6)**, 1517-1528 (2014).

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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