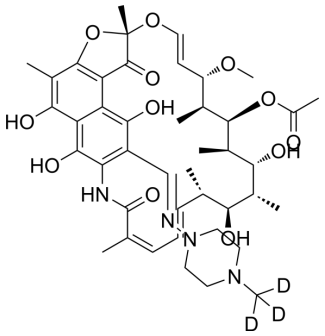
Rifampicin-d3

Cat. No.:	HY-B0272S
CAS No.:	1262052-36-7
Molecular Formula:	$C_{43}H_{55}D_3N_4O_{12}$
Molecular Weight:	825.96
Target:	Bacterial; Influenza Virus; Antibiotic
Pathway:	Anti-infection
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	Rifampicin-d_3 is the deuterium labeled Rifampicin. Rifampicin is a potent and broad spectrum antibiotic against bacterial pathogens. Rifampicin has anti-influenza virus activities[1][2].
In Vitro	Stable heavy isotopes of hydrogen, carbon, and other elements have been incorporated into drug molecules, largely as tracers for quantitation during the drug development process. Deuteration has gained attention because of its potential to affect the pharmacokinetic and metabolic profiles of drugs[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. Russak EM, et al. Impact of Deuterium Substitution on the Pharmacokinetics of Pharmaceuticals. Ann Pharmacother. 2019;53(2):211-216.

[2]. Piriou A, et al. Fatty liver induced by high doses of rifampicin in the rat: possible relation with an inhibition of RNA polymerases in eukariotic cells. Arch Toxicol Suppl. 1979;(2):333-7.

[3]. Yu J, et al. Monitoring in vivo fitness of rifampicin-resistant Staphylococcus aureus mutants in a mouse biofilm infection model. J Antimicrob Chemother. 2005 Apr;55(4):528-34. Epub 2005 Mar 2.

[4]. Erokhina MV, et al. [In vitro development of rifampicin resistance in the epithelial cells]. Probl Tuberk Bolezn Legk. 2006;(8):58-61.

[5]. Hamzehei M, et al. Inhibition of influenza A virus replication by rifampicin and selenocystamine. J Med Virol. 1980;6(2):169-74.

Caution: Product has not been fully validated for medical applications. For research use only.

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