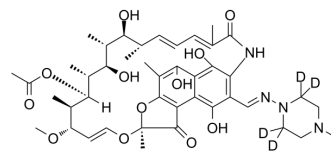


Rifampicin-d₄

Cat. No.:	HY-B0272S2		
Molecular Formula:	C ₄₃ H ₅₄ D ₄ N ₄ O ₁₂		
Molecular Weight:	826.96		
Target:	Bacterial; Influenza Virus; Antibiotic		
Pathway:	Anti-infection		
Storage:	Powder	-20°C	3 years
		4°C	2 years
	In solvent	-80°C	6 months
		-20°C	1 month



SOLVENT & SOLUBILITY

In Vitro

DMF : ≥ 20 mg/mL (24.18 mM)
 DMSO : ≥ 3.3 mg/mL (3.99 mM)
 DMF:PBS(pH 7.2)(1:1) : ≥ 0.5 mg/mL (0.60 mM)
 Ethanol : ≥ 0.12 mg/mL (0.15 mM)
 * "≥" means soluble, but saturation unknown.

Preparing Stock Solutions	Solvent Concentration	Mass		
		1 mg	5 mg	10 mg
	1 mM	1.2092 mL	6.0462 mL	12.0925 mL
	5 mM	0.2418 mL	1.2092 mL	2.4185 mL
	10 mM	0.1209 mL	0.6046 mL	1.2092 mL

Please refer to the solubility information to select the appropriate solvent.

BIOLOGICAL ACTIVITY

Description

Rifampicin-d₄ is the deuterium labeled Rifampicin. Rifampicin is a potent and broad spectrum antibiotic against bacterial pathogens. Rifampicin has anti-influenza virus activities.

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]. Hamzehei M, et al. Inhibition of influenza A virus replication by rifampicin and selenocystamine. *J Med Virol.* 1980;6(2):169-74.
- [3]. 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.
- [4]. Erokhina MV, et al. [In vitro development of rifampicin resistance in the epithelial cells]. *Probl Tuberk Bolezn Legk.* 2006;(8):58-61.
- [5]. 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.
-

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

Tel: 609-228-6898

Fax: 609-228-5909

E-mail: tech@MedChemExpress.com

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA