Product Data Sheet

Product Name: Rifampicin-d4
Cat. No.: GC64254

Chemical Properties

Cas. No.

Formula	C43H54D4N4O12	M.Wt	826.96
Solubility	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)	Storage	Store at -20°C
General tips	For obtaining a higher solubility , please warm the tube at 37 ℃ and shake it in the ultrasonic bath for a while.Stock solution can be stored below -20℃ for several months.		
Shipping Condition	Evaluation sample solution : ship with blue ice All other available size: ship with RT , or blue ice upon request.		
Structure	Rifampicin-d4		

Background

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

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].

[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

Tel: (909) 407-4943 Fax: (626) 353-8530 E-mail: tech@glpbio.com
Address: 10292 Central Ave. #205, Montclair, CA, USA

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.

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Address: 10292 Central Ave. #205, Montclair, CA, USA