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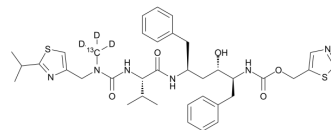
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Ritonavir-13C,d3

Cat. No.:	HY-90001S1
Molecular Formula:	C ₃₆ ¹³ CH ₄₅ D ₃ N ₆ O ₅ S ₂
Molecular Weight:	724.96
Target:	HIV Protease; HIV; SARS-CoV; Apoptosis
Pathway:	Anti-infection; Metabolic Enzyme/Protease; Apoptosis
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	Ritonavir-13C,d3 (ABT 538-13C,d3) is the 13C- and deuterium labeled Ritonavir. Ritonavir (ABT 538) is an inhibitor of HIV protease used to treat HIV infection and AIDS. Ritonavir is also a SARS-CoV 3CL ^{Pro} inhibitor with an IC ₅₀ of 1.61 μM.
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.
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- [3]. Kumar GN, et al. Cytochrome P450-mediated metabolism of the HIV-1 protease inhibitor ritonavir (ABT-538) in human liver microsomes. *J Pharmacol Exp Ther*. 1996 Apr;277(1):423-31.
- [4]. Eagling VA, et al. Differential inhibition of cytochrome P450 isoforms by the protease inhibitors, ritonavir, saquinavir and indinavir. *Br J Clin Pharmacol*. 1997 Aug;44(2):190-4.
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- [7]. Kumar GN, et al. Potent inhibition of the cytochrome P-450 3A-mediated human liver microsomal metabolism of a novel HIV protease inhibitor by ritonavir: A positive drug-drug interaction. *Drug Metab Dispos*. 1999 Aug;27(8):902-8.

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

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