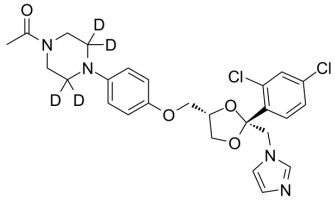
Ketoconazole-d4

Cat. No.:	HY-B0105S1
CAS No.:	1398065-75-2
Molecular Formula:	$C_{26}H_{24}D_4Cl_2N_4O_4$
Molecular Weight:	535.46
Target:	Fungal; Cytochrome P450; Ras
Pathway:	Anti-infection; Metabolic Enzyme/Protease; GPCR/G Protein
Storage:	Powder -20°C 3 years 4°C 2 years In solvent -80°C 6 months -20°C 1 month



BIOLOGICAL ACTIVITY

Description	Ketoconazole-d_4 is the deuterium labeled Ketoconazole. Ketoconazole (R-41400) is an imidazole anti-fungal agent, a CYP3A4 and CYP24A1 inhibitor.
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]. Seif El-Din SH, et al. Effect of ketoconazole, a cytochrome P450 inhibitor, on the efficacy of quinine and halofantrine against Schistosoma mansoni in mice. Korean J Parasitol. 2013 Apr;51(2):165-75.

[3]. Eil C. Ketoconazole binds to the human androgen receptor. Horm Metab Res. 1992 Aug;24(8):367-70.

[4]. Muindi JR et al. CYP24A1 inhibition enhances the antitumor activity of calcitriol. Endocrinology. 2010 Sep;151(9):4301-12.

[5]. Amrita Datta, et al. High-throughput screening identified selective inhibitors of exosome biogenesis and secretion: A drug repurposing strategy for advanced cancer. Sci Rep. 2018 May 25;8(1):8161.

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